

UB125 1-F

TRAVEL AND TOURISM IN MICHIGAN : A STATISTICAL PROFILE

First Edition, 1986



Research Monograph # 1

**Michigan State University
Travel, Tourism and Recreation Resource Center**

Suggested citation:

Spotts, Daniel M. (ed.). 1986. Travel and Tourism in Michigan: A Statistical Profile. Research Monograph #1. Travel, Tourism and Recreation Resource Center, Michigan State University. East Lansing.

Price \$20.00 postpaid. Additional copies may be obtained from the TTRRC. An order form is appended.

MSU is an Equal Opportunity/Affirmative Action Employer. MSU is an Equal Opportunity/Affirmative Action Employer.

**TRAVEL AND TOURISM IN MICHIGAN:
A STATISTICAL PROFILE**

Edited
by

**Daniel M. Spotts
Assistant Professor
Department of Park and Recreation Resources
Michigan State University**



Research Monograph # 1

**Michigan Travel, Tourism
and Recreation Resource
Center**

First Edition, 1986

The development of this book was made possible by a grant from the Travel Bureau, Michigan Department of Commerce. Additional support was provided by the Michigan Travel, Tourism and Recreation Resource Center.

The Michigan Travel, Tourism and Recreation Resource Center is supported by:

Department of Park and Recreation Resources, Michigan State University.

Agricultural Experiment Station, Michigan State University.

Cooperative Extension Service, Michigan State University.

Copyright © 1986 by the Board of Trustees, Michigan State University.

ACKNOWLEDGEMENTS

I am pleased to acknowledge the generous assistance of a number of individuals who contributed to this project.

I particularly wish to thank several public-spirited professionals in state government for conducting special computer analyses, explaining the idiosyncrasies of their data collection procedures, and fulfilling requests for information:

Larry Beckon, Management Services Division, Michigan Dept. of Transportation.
Dick Best, Vehicle Programs Division, Michigan Dept. of State.
Dave Borzenski and Roger Ostrander, Systems Division, Michigan Dept. of Treasury.
Bob Couvereur, Recreation Services Division, Michigan Dept. of Natural Resources.
Von Logan, Charles Lake, and Al Lesniowski, Bureau of Research and Statistics, Michigan Employment Security Commission.
Al Miller, Operations, Audit, and Evaluation Division, Michigan Dept. of Treasury.
Les Nichols, Waterways Division, Michigan Dept. of Natural Resources.
Kerr Stuart, Parks Division, Michigan Dept. of Natural Resources.
Ralph Swan, Bureau of Transportation Planning, Michigan Dept. of Transportation.

The development of this book was made possible by a grant from the Travel Bureau, Michigan Department of Commerce. Special thanks to John Savich, Director of the Bureau, for his support, and to Dave Morris, Chief of Research, Evaluation, and Grants, for his assistance with obtaining data and administering the grant.

I also wish to thank MSU faculty members Ed Mahoney, Chuck Nelson, Tim Rear-don, and Dan Stynes for taking time out of demanding schedules to write chapters on topics in their areas of expertise; research assistants John Krukoff and Tanya Mohny for unearthing and tabulating information; research aides Tina Jennings and Julie Green for typing and proofreading tables and text; Debra Murawski for preparing tables for publication; and Bettye Warren for typing innumerable letters. I am also grateful for the assistance of TTRRC staff members Susan DeRosa and Pia Katila.

The development of a volume such as this had been suggested by several MSU professors over the years. TTRRC Director Don Holecek, however, resurrected the idea and helped obtain funding. Don also greatly facilitated the success of the project by making it the top priority of the Center.

Of the many individuals who assisted this venture, Thord Sundstrom, the TTRRC computer specialist, contributed the most time and talent. Thord set up the data bases, performed all data analyses and manipulations, shouldered much of the managerial burden of the project, and Laser-printed the entire publication. Because of Thord's contribution this book has greater depth, breadth, and timeliness than would otherwise have been possible.

Finally, I wish to thank Billboard Publications, Laventhol and Horwath, Lodging Hospitality, Ogilvy and Mather Partners, the Recreation Vehicle Industry Association, Roy and Betty Rasmussen, and the U.S. Travel Data Center for permission to reprint material from their publications.

Daniel M. Spotts
May 5, 1986

TABLE OF CONTENTS

	Page
COMPREHENSIVE LIST OF TABLES.	vi
LIST OF TABLES CONTAINING COUNTY-LEVEL INFORMATION.	xvii
LIST OF TABLES CONTAINING SITE-SPECIFIC INFORMATION	xix
LIST OF FIGURES.	xxi
 Chapter	
1. Introduction	
<i>Daniel M. Spotts</i>	1
2. Distinguishing Features of Travel and Tourism in Michigan	
<i>Daniel M. Spotts and John D. Krukoff</i>	8
3. Travel Promotion and Advertising in Michigan	
<i>Daniel M. Spotts</i>	14
4. Selected Indicators of Traveler Flows	
<i>Daniel M. Spotts</i>	32
5. International Travel To and From Michigan	
<i>Daniel M. Spotts</i>	45
6. Estimates of the Economic Impact of Travel in Michigan	
<i>Daniel M. Spotts</i>	57
7. Commercial Lodging in Michigan	
<i>Timothy E. Reardon and Daniel M. Spotts.</i>	66
8. Bed & Breakfast Establishments in Michigan	
<i>Edward M. Mahoney.</i>	83
9. Eating and Drinking Places in Michigan	
<i>Daniel M. Spotts</i>	90
10. Second Homes and Other Temporary Residences in Michigan	
<i>Daniel M. Spotts</i>	95
11. Federal Recreation Resources in Michigan	
<i>Daniel M. Spotts</i>	107
12. Michigan's State Park System	
<i>Daniel M. Spotts</i>	118
13. Camping in Michigan	
<i>Charles M. Nelson</i>	148
14. Recreational Boating in Michigan	
<i>Daniel J. Styne</i>	161

Chapter		Page
15.	Recreational Fishing in Michigan <i>Edward M. Mahoney, Douglas B. Jester, Jr., and Gale C. Jansen . . .</i>	187
16.	Hunting in Michigan <i>Charles M. Nelson</i>	207
17.	Winter Sports in Michigan <i>Daniel M. Spotts</i>	227
18.	Golf Facilities in Michigan <i>Daniel M. Spotts</i>	236
19.	Employment in Tourism-Related Businesses in Michigan <i>Daniel M. Spotts</i>	241
20.	Sales and Use Tax Collections by Michigan County for Selected Business Categories <i>Daniel M. Spotts</i>	254
21.	Miscellaneous Tables <i>Daniel M. Spotts</i>	280

APPENDICES

A.	AUTHOR PROFILES.	295
B.	ABBREVIATIONS USED IN THIS BOOK.	297
C.	ADDITIONAL REFERENCES.	299
D.	DESCRIPTION OF THE MICHIGAN TRAVEL, TOURISM AND RECREATION RESOURCE CENTER.	305
	ORDER FORM FOR ADDITIONAL COPIES.	309

COMPREHENSIVE LIST OF TABLES

Table		Page
1. INTRODUCTION		
1-1	State populations in 1980, 1983, and 1984	3
3. TRAVEL PROMOTION AND ADVERTISING IN MICHIGAN		
3-1	Number of press or travel writers tours conducted by Michigan Travel Bureau versus equivalent agencies in surrounding states, 1983 and 1984	14
3-2	Total proposed budgets and proposed advertising budgets of the nation's state travel offices, Fiscal Year 1985-1986.	16
3-3	Breakdown of paid advertising budgets of Michigan Travel Bureau and equivalent agencies in surrounding states, Fiscal Year 1984-85	18
3-4	Breakdown of paid advertising budgets of Michigan Travel Bureau and equivalent agencies in surrounding states, Fiscal Year 1983-84	20
3-5	Travel advertising expenditures of states in U.S. measured media, 1982-1984.	21
3-6	Travel advertising expenditures of Michigan and surrounding states in U.S. measured media, by type of medium, 1983 and 1984	22
3-7	Travel advertising expenditures of the province of Ontario in U.S. measured media, 1982-1984.	23
3-8	Estimated number of persons visiting Michigan's highway welcome centers by month, 1979-1985.	28
3-9	Number of pieces of literature distributed at Michigan's highway welcome centers, 1962-1984	30
3-10	Number of pieces of literature advertising northeast lower Michigan versus northwest lower Michigan at selected highway welcome centers.	30
3-11	Auto travelers' expressed familiarity with northeast lower Michigan versus northwest lower Michigan	31
4. SELECTED INDICATORS OF TRAVELER FLOWS		
4-1	Total number of vehicles crossing the Mackinac Bridge, 1957-1985 (raw counts).	33

4-2	Annual adjusted average daily traffic counts for three bridges in Michigan, 1977-1985	33
4-3	Total number of vehicles crossing the Mackinac Bridge by month, 1974-1985 (raw counts).	35
4-4	Total number of northbound and southbound vehicles crossing the Sault Ste. Marie International Bridge by month, 1975-1985 (raw counts)	36
4-5	Usage of the Detroit-Windsor Tunnel, 1974-1985 (raw counts)	37
4-6	Locations of selected permanent traffic recorder stations in Michigan. . . .	38
4-7	Annual adjusted average daily traffic counts for selected permanent traffic recorder stations, 1977-1985.	39
4-8	Adjusted average daily traffic counts for selected permanent traffic recorder stations by month, 1984	40
4-9	Number of deplaned, enplaned, and total passengers at Michigan's air carrier airports, 1979-1985.	42

5. INTERNATIONAL TRAVEL TO AND FROM MICHIGAN

5-1	Relative popularity of states and territories as destinations for overseas tourists, 1984.	46
5-2	Number of foreign tourists choosing Michigan as a destination, by region of origin, 1983 and 1984.	47
5-3	Number of foreign tourists choosing Michigan as a destination, by selected countries of origin, 1983 and 1984.	48
5-4	Volume and economic impact of Canadian overnight travel to and through Michigan, 1979-1984	49
5-5	Number of person-visits to and through Michigan by Canadians on overnight trips, by selected travel-related variables, 1981-1984.	51
5-6	Measures of the direct economic impact of foreign visitors to Michigan, 1983.	52
5-7	Number of passport recipients in each state in the U.S., 1983	53
5-8	Number of passports issued to residents of Michigan and surrounding states, 1971-1983.	55
5-9	First area destination of passport recipients residing in Michigan, 1972-1983.	56

6. ESTIMATES OF THE ECONOMIC IMPACT OF TRAVEL IN MICHIGAN

6-1	Estimates of each state's economic dependence on travel, 1983.	59
6-2	Travel-related employment in state economies, 1983	61
6-3	State tax revenues generated by domestic travel in the U.S., 1983.	62
6-4	Estimates of the direct economic impact of domestic travel on various sectors of Michigan's economy, 1977-1983	65

7. COMMERCIAL LODGING IN MICHIGAN

7-1	Inventory of hotel and motel systems operating at least one property in Michigan, 1975.	67
7-2	Inventory of hotel and motel systems operating at least one property in Michigan, 1985.	68
7-3	Growth in the supply of affiliated commercial lodging in Michigan, 1975-1985.	69
7-4	Selected characteristics of Michigan's hotel, motel, and tourist court industry (SIC 701), 1974-1983.	71
7-5	Occupancy rates, average rates, and room sales per guest for various types of lodging establishments in Michigan, 1983 and 1984.	73
7-6	Overall occupancy rates of various types of lodging establishments in Michigan by month, 1984.	74
7-7	Room sales per occupied room (average rate) of various types of lodging establishments in Michigan by month, 1984	75
7-8	Characteristics of "top performing" lodging establishments in Michigan, 1984 and 1985.	76
7-9	Lodging preferences of winter travel parties in the central Upper Peninsula of Michigan	78

8. BED AND BREAKFAST ESTABLISHMENTS IN MICHIGAN

8-1	Number of rooms rented by B&Bs in Michigan.	84
8-2	Type of bathroom facilities in Michigan B&Bs	84
8-3	Age distribution of buildings in which Michigan B&Bs were operated . . .	85
8-4	Zoning of land where Michigan B&Bs were located	85
8-5	Food service facilities in Michigan B&Bs.	86
8-6	Type of food service offered to Michigan B&B guests.	86

8-7	Reasons cited by owners/operators for opening a B&B in Michigan.	87
8-8	Type of guests staying at B&Bs in Michigan	88
8-9	Length of stays at B&Bs in Michigan	88

9. EATING AND DRINKING PLACES IN MICHIGAN

9-1	Selected characteristics of eating and drinking places in Michigan (SIC 581), 1974-1983	92
9-2	Distribution of employees of eating and drinking places in Michigan (SIC 581) by size of firm, 1974-1983.	93
9-3	Distribution of statewide payroll of Michigan's eating and drinking places (SIC 581) by size of firm, 1974-1983	94

10. SECOND HOMES AND OTHER TEMPORARY RESIDENCES IN MICHIGAN

10-1	Number of temporary residences by state: 1960, 1970, and 1980	97
10-2	Number of temporary residences by Michigan county, 1960 and 1980.	100

11. FEDERAL RECREATION RESOURCES IN MICHIGAN

11-1	Acreages of Michigan units of the National Park System as of December 31, 1984	107
11-2	Number of recreational visits to Michigan units of the National Park System, by year	109
11-3	Number of overnight stays in Michigan units of the National Park System, 1975-1985.	110
11-4	Acreages of Michigan units of the National Forest System as of September 30, 1984	111
11-5	Estimated participation in recreation activities in Michigan's National Forests, Fiscal Years 1978-1984.	112
11-6	Estimated use of dispersed recreation areas in National Forests in Michigan, Fiscal Years 1978-1984.	113
11-7	Estimated use of developed recreation sites in National Forests in Michigan, Fiscal Years 1981-1984.	114
11-8	Acreages of Michigan units of the National Wildlife Refuge System as of September 30, 1984	115
11-9	Number of persons visiting the Soo Locks, Sault Ste. Marie, Michigan by month, 1958-1985.	116

12. MICHIGAN'S STATE PARK SYSTEM

12-1	Acreages of and number of campsites in units of Michigan's state park system.	119
12-2	Size of and number of modern campsites in the nation's state park systems, Fiscal Year 1983-84	121
12-3	Visitation to the nation's state park systems, Fiscal Year 1983-84	122
12-4	Selected financial aspects of the nation's state park systems, Fiscal Year 1983-84.	123
12-5	Estimated number of campers visiting Michigan State Parks and Recreation Areas, 1977-1984.	128
12-6	Number of camping permits issued at Michigan State Parks and Recreation Areas, 1977-1984.	130
12-7	Number of overnight stays in campgrounds and backcountry in Michigan State Parks and Recreation Areas, Fiscal Years 1983-1985 . . .	132
12-8	Estimated number of day-users visiting Michigan State Parks and Recreation Areas, 1977-1984.	134
12-9	Estimated total number of persons visiting Michigan State Parks and Recreation Areas, 1977-1984	136
12-10	Estimated number of campers visiting Michigan State Parks and Recreation Areas by month, 1984.	138
12-11	Estimated number of day-users visiting Michigan State Parks and Recreation Areas by month, 1984.	140
12-12	Estimated total number of persons visiting Michigan State Parks and Recreation Areas by month, 1984.	142
12-13	Number of camping permits issued at Michigan State Parks and Recreation Areas by month, 1984.	144
12-14	Summer occupancy rates of campgrounds in selected Michigan State Parks and Recreation Areas	146
12-15	Attendance at attractions operated by the Mackinac Island State Park Commission, 1983-1985.	147

13. CAMPING IN MICHIGAN

13-1	Supply of campgrounds and campsites in Michigan by provider, 1985. . . .	149
13-2	Supply of designated campgrounds and campsites in Michigan by region, 1985	149

13-3	Supply of state/federal public versus local public and private campgrounds/campsites in Michigan, 1980-85.	150
13-4	Memorial weekend through Labor Day weekend campground occupancy rates in Michigan by provider, 1980-85.	151
13-5	Estimates of Michigan camping market share by campground provider.	152
13-6	Base camping fees (in dollars per night) at state, federal, and commercial campgrounds in Michigan, 1980-85.	152
13-7	Estimated average base commercial campground fees in Michigan by region, 1980-84.	153
13-8	Number of recreation vehicles shipped to Michigan and surrounding states, 1973-1984.	154
13-9	Number of recreation vehicle shipments by state, 1984	155
13-10	Selected characteristics of registered campers at Michigan state forest campgrounds and at MAPCO campgrounds	156
13-11	Income distributions of state forest campground and MAPCO camping parties.	157
13-12	Recreation activities of state forest campground and MAPCO camping parties.	157
13-13	Shelters type(s) used by Michigan state forest and MAPCO campers	158
13-14	Distribution of campground use in Michigan in 1983 for state forest and MAPCO campers.	158

14. RECREATIONAL BOATING IN MICHIGAN

14-1	Water resources by Michigan county	164
14-2	Number of numbered boats by state, 1983 and 1984.	166
14-3	Number of registered watercraft by Michigan county by type of craft, as of December 4, 1985.	168
14-4	Number of registered watercraft by Michigan county by length of craft, as of December 4, 1985.	170
14-5	Boat types by summer storage location, 1980	172
14-6	Storage locations of registered boats in Michigan during the 1980 boating season	173
14-7	Estimated number of recreational boat-days that took place in each of Michigan's counties in 1980	174

14-8	Number of recreational boat-days in Michigan by boat size class, 1980	176
14-9	Trends in Michigan boating activity on Great Lakes and inland lakes, 1974-80	176
14-10	Inventory of Michigan's Great Lakes recreational boating facilities by Great Lake served, 1983	177
14-11	Inventory of Michigan's Great Lakes recreational boating facilities by Great Lake served, 1978	177
14-12	Inventory of Great Lakes recreational boating facilities by Michigan county, 1983	178
14-13	Inventory of Great Lakes recreational boating facilities by Michigan county, 1978	179
14-14	Marine sales by state, 1983.	183
14-15	Dollar volume of boating equipment sales in Michigan, 1980-1983.	184
14-16	Boating activity and spending by craft type, 1981	184
14-17	Selected characteristics of boat dealers in Michigan (SIC 555), 1974-1983	185
14-18	Attendance at and sales volume of the Detroit Boat and Fishing Show, 1981-1985.	186

15. RECREATIONAL FISHING IN MICHIGAN

15-1	Fishing license sale and revenues, 1984 license year.	188
15-2	Michigan fishing license sales, 1963-83	188
15-3	Number of resident annual fishing licenses by Michigan county, 1984 license year	189
15-4	Distribution of nonresident license holders by state	190
15-5	Estimates of sport fishing effort (angler-days) in Michigan.	191
15-6	Percentage of resident licensed anglers who own boats/canoes used for fishing	191
15-7	Self-rated skill level of anglers.	192
15-8	Socioeconomic characteristics of resident and nonresident licensed anglers	193
15-9	Percent of resident Michigan anglers who fished out-of-state, 1984.	193
15-10	Other states/countries where Michigan resident anglers fished	194

15-11	Percent of resident and nonresident anglers who fished for various species.	194
15-12	Locations where resident and nonresident anglers fished for various species.	195
15-13	Methods resident anglers used to catch various species.	196
15-14	Modes resident anglers used to catch various species.	196
15-15	Information sources used by anglers.	197
15-16	Preferred catch and eating species of resident and nonresident anglers . . .	197
15-17	Preferred mode and method of fishing by resident and nonresident anglers.	198
15-18	Importance resident anglers assigned various attributes when selecting a fishing site.	198
15-19	Importance nonresident anglers assigned various attributes when selecting a fishing site	199
15-20	Importance resident anglers placed on various reasons for fishing	199
15-21	Estimated per-day angler expenditures by species.	200
15-22	Locations of permanent residences of Michigan charter boat customers. . .	202
15-23	Purpose of trips on which persons charter-fished.	202
15-24	Length of trips on which people charter-fished.	202
15-25	Number of persons in the travel party on trips on which persons charter-fished.	203
15-26	Number of persons in the charter boat party	203
15-27	Type of lodging used by charter boat customers	203
15-28	Percent of first time charter boat customers	204
15-29	Family income of charter boat customers	204
15-30	Education levels of charter boat customers.	204

16. HUNTING IN MICHIGAN

16-1	Acreage of lands open to public hunting in Michigan.	207
16-2	Hunting activity in Michigan during the 1980-81 hunting season by region and land ownership.	209

16-3	Michigan hunting and trapping license sales, 1980-84	210
16-4	Statistics on pheasant hunting in Michigan, 1979-83	211
16-5	Statistics on ruffed grouse hunting in Michigan, 1979-83	212
16-6	Statistics on woodcock hunting in Michigan, 1979-83.	213
16-7	Statistics on cottontail rabbit hunting in Michigan, 1979-83.	213
16-8	Statistics on snowshoe hare hunting in Michigan, 1979-83	214
16-9	Statistics on squirrel hunting in Michigan, 1979-83.	214
16-10	Statistics on raccoon hunting in Michigan, 1979-83.	215
16-11	Statistics on duck hunting in Michigan, 1979-83	216
16-12	Statistics on goose hunting in Michigan, 1979-83.	217
16-13	Statistics on turkey hunting in Michigan, 1981-85	217
16-14	Statistics on firearm deer hunting in Michigan, 1976-82.	219
16-15	Statistics on archery deer hunting in Michigan, 1976-82.	220
16-16	Statistics on bear hunting in Michigan, 1979-83.	220
16-17	Size and value of furbearer harvest by trappers, 1981-83.	221
16-18	Estimated Michigan expenditures of hunters and trappers during 1982 . . .	222
16-19	Distribution of expenditures for hunting in Michigan in 1980	223
16-20	Potential meat value of 1982 hunter-trapper harvest in Michigan	224
16-21	Potential fur/hide value of 1982 hunter-trapper harvest in Michigan	224

17. WINTER SPORTS IN MICHIGAN

17-1	Number of registered snowmobiles by state, 1984	230
17-2	Inventory of public lands providing snowmobiling and cross-country skiing opportunities, by Michigan county, 1981	231
17-3	Number of downhill ski areas by state, 1985	233
17-4	Selected characteristics of Michigan's downhill ski areas.	234

18. GOLF FACILITIES IN MICHIGAN

18-1	Number of golf courses and golf course facilities in Michigan, by type	237
------	---	-----

18-2	Inventory of public golf facilities by Michigan county, 1985.	238
18-3	Number of golf courses by state, 1984.	240
19. EMPLOYMENT IN TOURISM-RELATED BUSINESSES IN MICHIGAN		
19-1	Average number of jobs in Michigan's water transportation services industry (SIC 446) by month, 1974-1984	243
19-2	Average number of jobs in Michigan's gasoline service station industry (SIC 554) by month, 1974-1984	243
19-3	Average number of jobs in Michigan's boat dealer industry (SIC 555) by month, 1974-1984.	244
19-4	Average number of jobs in Michigan's recreational and utility trailer dealer industry (SIC 556) by month, 1974-1984	244
19-5	Average number of jobs in Michigan's eating and drinking places industry (SIC 581) by month, 1974-1984	245
19-6	Average number of jobs in Michigan's hotel, motel, and tourist court industry (SIC 701) by month, 1974-1984.	245
19-7	Average number of jobs in Michigan's rooming and boarding house industry (SIC 702) by month, 1980-1984.	246
19-8	Average number of jobs in Michigan's camps and trailer parks industry (SIC 703) by month, 1974-1984	246
19-9	Average number of jobs in Michigan's amusement and recreation services industry (SIC 799) by month, 1974-1984	247
19-10	Average number of jobs in tourism-related industries in Michigan by month, 1974-1984	247
19-11	Annual average number of jobs in tourism-related industries by Michigan county, 1974-1984.	250
19-12	Average number of jobs in tourism-related industries by Michigan county by month, 1984.	252
20. SALES AND USE TAX COLLECTIONS BY MICHIGAN COUNTY FOR SELECTED BUSINESS TYPES		
20-1	Definitions of selected Business Classification Codes employed by the Michigan Department of Treasury.	259
20-2	Sales and use tax collections by Michigan county by Business Classification Code, First Quarter 1983.	260

20-3	Sales and use tax collections by Michigan county by Business Classification Code, Second Quarter 1983	262
20-4	Sales and use tax collections by Michigan county by Business Classification Code, Third Quarter 1983	264
20-5	Sales and use tax collections by Michigan county by Business Classification Code, Fourth Quarter 1983	266
20-6	Sales and use tax collections by Michigan county by Business Classification Code, totals for 1983.	268
20-7	Sales and use tax collections by Michigan county by Business Classification Code, First Quarter 1984	270
20-8	Sales and use tax collections by Michigan county by Business Classification Code, Second Quarter 1984	272
20-9	Sales and use tax collections by Michigan county by Business Classification Code, Third Quarter 1984.	274
20-10	Sales and use tax collections by Michigan county by Business Classification Code, Fourth Quarter 1984	276
20-11	Sales and use tax collections by Michigan county by Business Classification Code, totals for 1984.	278

21. MISCELLANEOUS TABLES

21-1	Average gasoline prices in Michigan and surrounding states, 1979-1985.	281
21-2	Average price of regular and unleaded gasoline in Michigan, 1979-1985.	282
21-3	Selected characteristics of gasoline service stations in Michigan (SIC 554), 1974-1983	283
21-4	Characteristics of domestic travel to and through Michigan, 1983-1984.	284
21-5	Characteristics of U.S. travelers to and through Michigan, 1983-84	287
21-6	Number of travel agency locations in Michigan and surrounding states, 1977-1985.	289
21-7	Characteristics of selected commercial attractions in Michigan.	290

LIST OF TABLES CONTAINING COUNTY-LEVEL INFORMATION

Table		Page
10-2	Number of temporary residences by Michigan county, 1960 and 1980. . . .	100
14-1	Water resources by Michigan county	164
14-3	Number of registered watercraft by Michigan county by type of craft, as of December 4, 1985.	168
14-4	Number of registered watercraft by Michigan county by length of craft, as of December 4, 1985.	170
14-7	Estimated number of recreational boat-days that took place in each of Michigan's counties in 1980	174
14-12	Inventory of Great Lakes recreational boating facilities by Michigan county, 1983	178
14-13	Inventory of Great Lakes recreational boating facilities by Michigan county, 1978	179
15-3	Number of resident annual fishing licenses by Michigan county, 1984 license year	189
17-2	Inventory of public lands providing snowmobiling and cross-country skiing opportunities, by Michigan county, 1981	231
18-2	Inventory of public golf facilities by Michigan county, 1985.	238
19-11	Annual average number of jobs in tourism-related industries by Michigan county, 1974-1984.	250
19-12	Average number of jobs in tourism-related industries by Michigan county by month, 1984.	252
20-2	Sales and use tax collections by Michigan county by Business Classification Code, First Quarter 1983.	260
20-3	Sales and use tax collections by Michigan county by Business Classification Code, Second Quarter 1983	262
20-4	Sales and use tax collections by Michigan county by Business Classification Code, Third Quarter 1983	264
20-5	Sales and use tax collections by Michigan county by Business Classification Code, Fourth Quarter 1983	266
20-6	Sales and use tax collections by Michigan county by Business Classification Code, totals for 1983.	268

20-7	Sales and use tax collections by Michigan county by Business Classification Code, First Quarter 1984	270
20-8	Sales and use tax collections by Michigan county by Business Classification Code, Second Quarter 1984	272
20-9	Sales and use tax collections by Michigan county by Business Classification Code, Third Quarter 1984.	274
20-10	Sales and use tax collections by Michigan county by Business Classification Code, Fourth Quarter 1984	276
20-11	Sales and use tax collections by Michigan county by Business Classification Code, totals for 1984.	278

LIST OF TABLES CONTAINING
SITE-SPECIFIC INFORMATION

Table	Page
3-8 Estimated number of persons visiting Michigan's highway welcome centers by month, 1979-1985.	28
4-1 Total number of vehicles crossing the Mackinac Bridge, 1957-1985 (raw counts).	33
4-2 Annual adjusted average daily traffic counts for three bridges in Michigan, 1977-1985	33
4-3 Total number of vehicles crossing the Mackinac Bridge by month, 1974-1985 (raw counts).	35
4-4 Total number of northbound and southbound vehicles crossing the Sault Ste. Marie International Bridge by month, 1975-1985 (raw counts)	36
4-5 Usage of the Detroit-Windsor Tunnel, 1974-1985 (raw counts)	37
4-7 Annual adjusted average daily traffic counts for selected permanent traffic recorder stations, 1977-1985.	39
4-8 Adjusted average daily traffic counts for selected permanent traffic recorder stations by month, 1984	40
4-9 Number of deplaned, enplaned, and total passengers at Michigan's air carrier airports, 1979-1985.	42
7-8 Characteristics of "top performing" lodging establishments in Michigan, 1984 and 1985.	76
11-1 Acreages of Michigan units of the National Park System as of December 31, 1984	107
11-2 Number of recreational visits to Michigan units of the National Park System, by year	109
11-3 Number of overnight stays in Michigan units of the National Park System, 1975-1985.	110
11-8 Acreages of Michigan units of the National Wildlife Refuge System as of September 30, 1984	115
11-9 Number of persons visiting the Soo Locks, Sault Ste. Marie, Michigan by month, 1958-1985.	116
12-1 Acreages of and number of campsites in units of Michigan's state park system.	119

12-5	Estimated number of campers visiting Michigan State Parks and Recreation Areas, 1977-1984.	128
12-6	Number of camping permits issued at Michigan State Parks and Recreation Areas, 1977-1984.	130
12-7	Number of overnight stays in campgrounds and backcountry in Michigan State Parks and Recreation Areas, Fiscal Years 1983-1985 . . .	132
12-8	Estimated number of day-users visiting Michigan State Parks and Recreation Areas, 1977-1984.	134
12-9	Estimated total number of persons visiting Michigan State Parks and Recreation Areas, 1977-1984	136
12-10	Estimated number of campers visiting Michigan State Parks and Recreation Areas by month, 1984.	138
12-11	Estimated number of day-users visiting Michigan State Parks and Recreation Areas by month, 1984.	140
12-12	Estimated total number of persons visiting Michigan State Parks and Recreation Areas by month, 1984.	142
12-13	Number of camping permits issued at Michigan State Parks and Recreation Areas by month, 1984.	144
12-14	Summer occupancy rates of campgrounds in selected Michigan State Parks and Recreation Areas	146
12-15	Attendance at attractions operated by the Mackinac Island State Park Commission, 1983-1985.	147
14-18	Attendance at and sales volume of the Detroit Boat and Fishing Show, 1981-1985.	186
17-4	Selected characteristics of Michigan's downhill ski areas.	234
21-7	Characteristics of selected commercial attractions in Michigan.	290

LIST OF FIGURES

Figure	Page
1-1 Counties and Department of Natural Resources regions in Michigan.	4
1-2 State and federal lands in Michigan.	5
3-1 Locations of highway welcome centers in Michigan	26
4-1 Locations of air carrier airports in Michigan	41
10-1 Number of temporary residences in 1980 by Michigan county	102
10-2 Percent change in number of temporary residences by Michigan county, 1960-1980.	103
10-3 Proportion of total housing units in Michigan counties that are temporary residences	104
14-1 Total number of Great Lake marina slips by Michigan county, 1983.	180
14-2 Net change in total number of Great Lake marina slips by Michigan county, 1978-1983.	181
14-3 Locations of Great Lake recreational harbors in Michigan.	182
19-1 Trends in tourism-related employment in Michigan, 1974-1984.	248

CHAPTER I

INTRODUCTION

Daniel M. Spotts

This book is a compendium of statistics on travel and tourism in Michigan gleaned from a wide variety of government, academic, and private sources. It is intended to help planners, investors, legislators, public officials, and entrepreneurs make informed decisions with regard to the state's travel and tourism industry.

Much of the information about travel and tourism in Michigan has been scattered across the state's libraries, academic institutions, and government offices, and has either not been made available to the public or else disseminated to limited audiences. This information, which represents an investment of literally millions of dollars, has consequently been underutilized. The plan of this book is to facilitate greater utilization of this information by gathering it into a single publication and distributing it to people who need it.

The book contains information at both a micro and a macro level. At a micro level, the book provides information on the quantity of recreation resources and the volume of travel activity in specific communities and counties to help businesses, consulting firms, chambers of commerce, visitor and convention bureaus, and local governments make business location decisions and develop marketing strategies. The micro level information includes county-level inventories of recreation facilities and indicators of travel activity in specific locales, such as traffic counts, state park attendance, and hotel/motel use tax collections.

At a macro level, the book provides information on the status of Michigan's travel and tourism industry as a whole to help state legislators and government officials make policy decisions and plan the state's marketing strategies. Because the travel and tourism industry, like any industry, is affected by a host of social and economic forces, constant surveillance of its performance is necessary to ensure that remedies can be prescribed when the industry or any of its component sectors need strengthening. Such surveillance is especially important in view of the increasing competition between Michigan and surrounding states for greater shares of the region's travel market. This heightened interstate rivalry is amply illustrated by Illinois' FY1985-86 travel office budget of \$15.5 million -- a 356% increase over its FY1983-84 budget, and presently the highest in the nation (U.S. Travel Data Center, 1985a:35; U.S. Travel Data Center, 1985b:33).

To facilitate informed decision-making at the state level, the book presents statewide information on travel promotion, economic impact, and the status of the principal sectors of the industry. In particular, the book contains numerous tables that show Michigan's standing relative to other states on some variable. These tables are intended to help describe Michigan's competitive advantages and disadvantages vis-a-vis other states. Some tables show Michigan's standing relative to its principal competitors, i.e., the surrounding states of Illinois, Indiana, Ohio, Wisconsin, and Minnesota. Other tables show Michigan's standing relative to each of the other states in the Union. The purpose for providing this amount of detail is two-fold. First, placing Michigan in a national perspective throws considerable light on the nature of travel and tourism in this state, and this is done most explicitly by showing Michigan in relation to each of the other states. Placing Michigan in a national perspective is particularly important since competition recently has been extending beyond regional boundaries. And second, some users of the book who may be

considering locating a business in Michigan may wish to compare Michigan with possibly any of the other states on a wide variety of variables.

Many of the differences between Michigan and other states portrayed in these tables are due to some extent to disparities in the populations of these states. For example, since both Illinois and Ohio have larger populations than Michigan, it is not surprising that more passports are issued to residents of Illinois and Ohio than to residents of Michigan (Table 5-7). The intervening influence of population size has been eliminated in many tables by displaying figures on a per capita basis. However, in the case of other tables it is useful to keep in mind that in all three years for which population-related data are presented (1980, 1983, and 1984), Michigan ranked eighth in the nation in population size (Table 1-1). Consequently if Michigan's ranking on some population-related variable is eighth, this is what one would expect given the size of Michigan's population vis-a-vis other state populations. If, on the other hand, Michigan's ranking on a population-related variable is above or below eighth, this indicates that Michigan's standing differs from what one would expect merely on the basis of its population size. For example, while Michigan ranks eighth in population, it ranks fourth in the number of recreation vehicle shipments it received in 1984 (Table 13-9), which may reflect the abundance of camping opportunities in this state.

The focus of the book is on travel and tourism in Michigan, "tourism" meaning recreation involving travel outside one's home area. Consequently the book does not deal with all forms of recreation but rather with selected forms of recreation that are important pursuits of tourists traveling in Michigan. Thus the book presents information on the availability and/or utilization of opportunities for camping, boating, fishing, hunting, golfing, snowmobiling, downhill skiing, and cross-country skiing, but not on the availability and/or utilization of neighborhood parks, community centers, and other local recreation facilities. It should be recognized, however, that the recreation opportunities that are discussed herein are utilized by local residents as well as tourists, and that this local use is included in statistics on the utilization of these opportunities (e.g., boat-days).

The problem with most statistical abstracts is that they present research findings and other information with little or no discussion of the methods used to derive the information and/or the limitations of the information. This of course can lead to inappropriate interpretations of the information. An effort has been made to ameliorate this problem as much as possible by discussing data limitations in footnotes to tables and in the texts. However, readers are encouraged to consult the sources of the information reprinted herein to learn more about the nature of any information on which they wish to base major decisions.

Each table in the book contains the most current information that was available at the time the table was constructed. All figures presented in these tables have been proofread against source figures. All dollar figures are in current, rather than constant, U.S. dollars and therefore are unadjusted for inflation. Profiles of contributing authors are provided in Appendix A. Abbreviations and symbols used throughout the book are defined in Appendix B. The counties and Michigan Department of Natural Resources regions referred to throughout the book are defined in Figure 1-1. The state and federal lands referred to in some chapters are portrayed in Figure 1-2. Seeming inconsistencies in data from different sources may be due to differing definitions, analytical procedures, or time periods. At the end of most chapters, both the literature cited therein and additional references on the general topic of the chapter are listed. The additional references are provided to inform readers of useful literature available on specific

Table 1-1. State populations in 1980, 1983, and 1984.

Rank	State	Population (000) As of April 1, 1980 (Census)	Rank	State	Population (000) As of July 1, 1983 (Estimate)	Rank	State	Population (000) As of July 1, 1984 (Provisional Estimate)
1	CA	23,668	1	CA	25,186	1	CA	25,622
2	NY	17,558	2	NY	17,663	2	NY	17,735
3	TX	14,229	3	TX	15,779	3	TX	15,989
4	PA	11,864	4	PA	11,889	4	PA	11,901
5	IL	11,427	5	IL	11,474	5	IL	11,511
6	OH	10,798	6	FL	10,742	6	FL	10,976
7	FL	9,746	7	OH	10,736	7	OH	10,752
8	MI	9,262	8	MI	9,050	8	MI	9,075
9	NJ	7,365	9	NJ	7,464	9	NJ	7,515
10	NC	5,882	10	NC	6,076	10	NC	6,165
11	MA	5,737	11	MA	5,763	11	GA	5,837
12	IN	5,490	12	GA	5,732	12	MA	5,798
13	GA	5,463	13	VA	5,556	13	VA	5,636
14	VA	5,347	14	IN	5,472	14	IN	5,498
15	MO	4,917	15	MO	4,963	15	MO	5,008
16	WI	4,706	16	WI	4,746	16	WI	4,766
17	TN	4,591	17	TN	4,676	17	TN	4,717
18	MD	4,217	18	LA	4,440	18	LA	4,462
19	LA	4,206	19	WA	4,302	19	MD	4,349
20	WA	4,132	20	MD	4,299	20	WA	4,349
21	MN	4,076	21	MN	4,144	21	MN	4,162
22	AL	3,894	22	AL	3,961	22	AL	3,990
23	KY	3,661	23	KY	3,713	23	KY	3,723
24	SC	3,122	24	OK	3,310	24	SC	3,300
25	CT	3,108	25	SC	3,256	25	OK	3,298
26	OK	3,025	26	CO	3,146	26	CO	3,178
27	IA	2,914	27	CT	3,139	27	CT	3,154
28	CO	2,890	28	AZ	2,970	28	AZ	3,053
29	AZ	2,718	29	IA	2,904	29	IA	2,910
30	OR	2,633	30	OR	2,658	30	OR	2,674
31	MS	2,521	31	MS	2,581	31	MS	2,598
32	KS	2,364	32	KS	2,426	32	KS	2,438
33	AR	2,286	33	AR	2,325	33	AR	2,349
34	WV	1,950	34	WV	1,962	34	WV	1,952
35	NE	1,570	35	UT	1,618	35	UT	1,652
36	UT	1,461	36	NE	1,596	36	NE	1,606
37	NM	1,303	37	NM	1,399	37	NM	1,424
38	ME	1,125	38	ME	1,145	38	ME	1,156
39	HI	965	39	HI	1,018	39	HI	1,039
40	RI	947	40	ID	987	40	ID	1,001
41	ID	944	41	NH	958	41	NH	977
42	NH	921	42	RI	956	42	RI	962
43	NV	800	43	NV	897	43	NV	911
44	MT	787	44	MT	815	44	MT	824
45	SD	691	45	SD	699	45	SD	706
46	ND	653	46	ND	681	46	ND	686
47	DC	638	47	DC	623	47	DC	623
48	DE	594	48	DE	606	48	DE	613
49	VT	511	49	VT	525	49	VT	530
50	WY	470	50	WY	516	50	WY	511
51	AK	402	51	AK	481	51	AK	500
	U.S.	226,549		U.S.	234,023		U.S.	236,201

SOURCE: U.S. Bureau of the Census. 1985. "State Population Estimates, by Age and Components of Change: 1980 to 1984." Current Population Reports, Population Estimates and Projections, Series P-25, No. 970, Table 1.

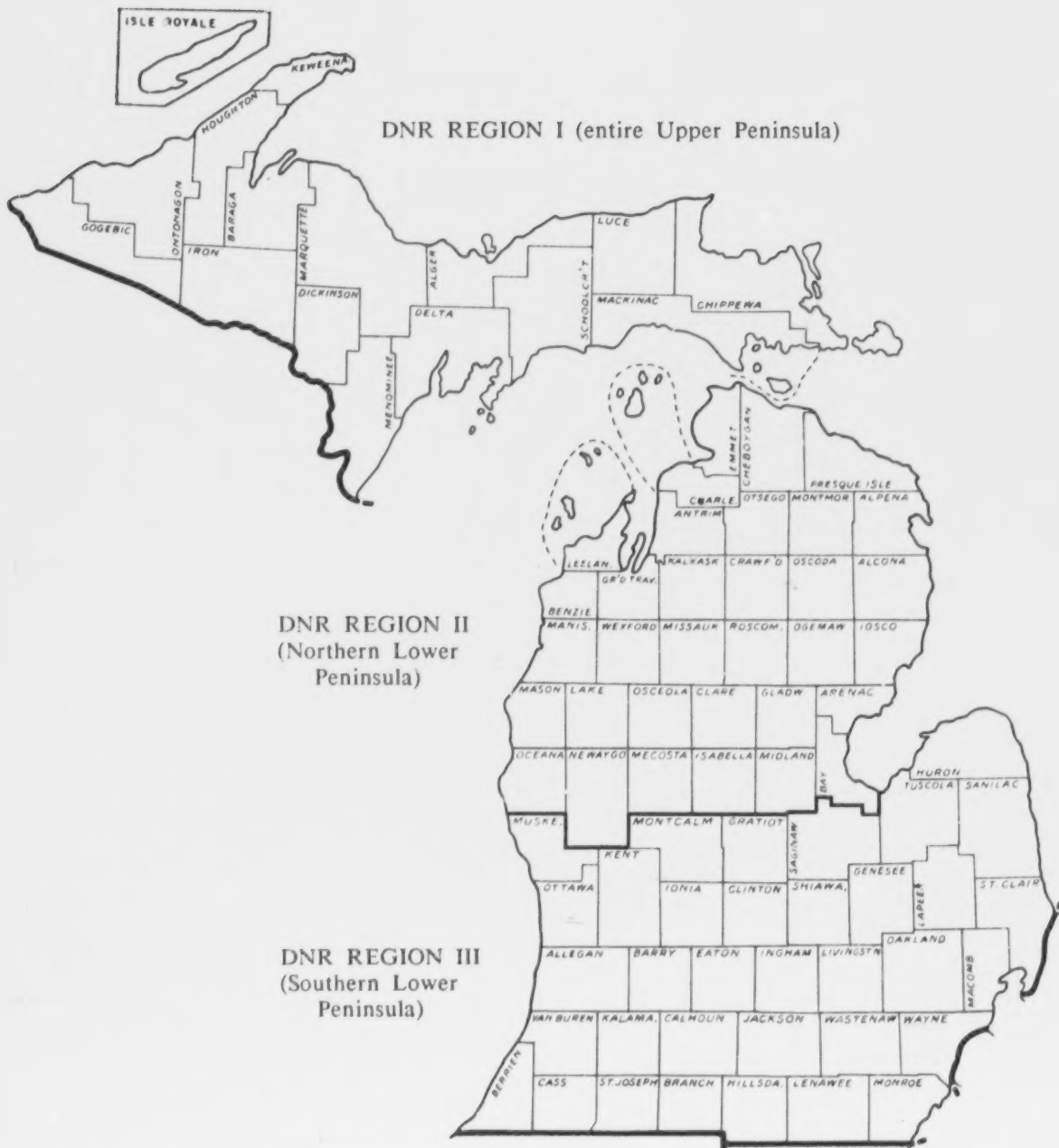


Figure 1-1. Michigan counties and Michigan Department of Natural Resources regions.

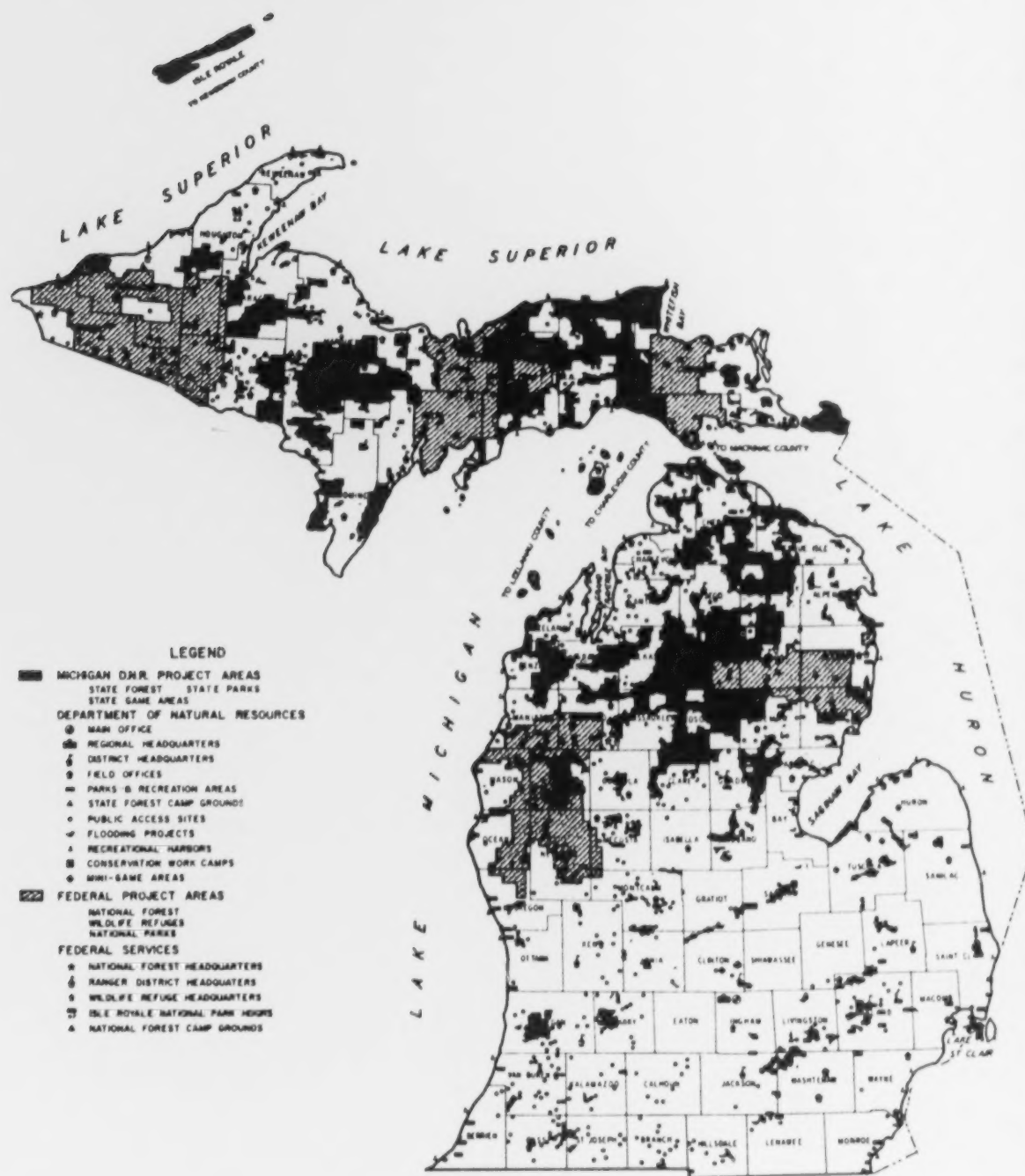


Figure 1-2. State and federal lands in Michigan.

SOURCE: Michigan Department of Natural Resources. n.d. Michigan's Forest Resources 1979: An Assessment. Lansing: Michigan Department of Natural Resources.

subjects.¹ Appendix C provides a bibliography of references on travel and tourism not listed elsewhere in the book.

Participants in a recent symposium on tourism research in Michigan, recognizing the long-standing need of the industry for more and better information on which to base decisions, recommended the establishment of a "Michigan Tourism Data/Information Bank" (Holecek, et al., 1982:5). Because the development of this book has necessitated the collection, organization, and computer storage of most of the available information on travel and tourism in Michigan, this recommended data base has now been established at the Travel, Tourism and Recreation Resource Center (TTRRC) at Michigan State University.² Although the data base needs to be expanded, it can in its present state meet various informational needs of the travel and tourism industry. For example, since all figures presented in this book are stored on computer files, special analyses of any of these data can be conducted. Also, data that were too detailed to present in the book, such as monthly state park attendance figures for each of the years 1977-1984, have been stored for possible future use.³

The information contained in this book is comprehensive, but not exhaustive. Every effort has been made to include as much useful and current information as possible within the limitations of the project budget. Many readers will nevertheless find that the book does not contain certain types of information they need. In most cases this is because the information does not exist. Indeed, at present there is no available information on some of the most basic characteristics of travel and tourism in Michigan, such as the statewide economic impact of certain recreation activities (e.g., snowmobiling), the number of travelers visiting Michigan or its component regions, or the characteristics of travelers visiting specific regions of the state. Moreover, some of the data that do exist on travel and tourism in Michigan have limited accuracy and/or applicability, as in the case of statewide estimates of travel expenditures (Table 6-4), regional estimates of hotel/motel occupancy rates (Table 7-5), and descriptions of the characteristics of Michigan's travel market (Table 21-5).

The TTRRC plans to regularly publish future editions of this book which will update and expand the information contained in this first edition. To ensure that these future editions meet the informational needs of the travel and tourism industry to the fullest extent possible, readers are encouraged to send their reactions to this book - positive or negative - to the TTRRC. We would especially like to know how you may have used information in the book and/or whether the book does not contain certain types of information you need.

¹Copies of most references listed in this book are available from the Travel, Tourism and Recreation Resource Center at Michigan State University. Contact the Center for details on availability and cost.

²A description of the TTRRC is provided in Appendix D.

³Contact the TTRRC for details on availability and cost.

References

- Holecek, Donald F., Daniel J. Stynes, Joseph D. Fridgen, and Lewis W. Moncrief. 1982. "Michigan Tourism Symposium: Reflections and Recommendations." In Fridgen, J.D. and D.J. Allen (eds.). Michigan Tourism: How Can Research Help? Symposium Proceedings, Special Report #6, Agricultural Experiment Station, Michigan State University. East Lansing.
- U.S. Travel Data Center. 1985b. Survey of State Travel Offices 1984-1985. Washington, D.C.: U.S. Travel Data Center.
- U.S. Travel Data Center. 1985. Survey of State Travel Offices 1985-1986. Washington, D.C.: U.S. Travel and Data Center.

CHAPTER 2

DISTINGUISHING FEATURES OF TRAVEL AND TOURISM IN MICHIGAN

Daniel M. Spotts and John D. Krukoff

Introduction

Certain aspects of travel and tourism in Michigan are "distinguishing" either in the sense of being singular characteristics of travel and tourism within this state, or in the sense of being outstanding in relation to comparable aspects of travel and tourism in other states. Since a knowledge of these distinguishing features serves to describe the character of travel and tourism in Michigan, and helps to identify ways in which Michigan's travel and tourism system may hold competitive advantages over those of other states, a listing of these special characteristics is provided in this chapter. This listing does not include all aspects of travel and tourism in Michigan that might be considered "distinguishing," but it does encompass all that we were able to definitively verify. The sources of the information presented below are shown in parentheses. These sources were organizations and/or publications. If the source was a publication, this publication is cited at the end of the chapter.

Unique Recreation and Travel Resources in Michigan

The 748-ft. Plaza Hotel in Detroit's Renaissance Center, measured from its lower street level, is the tallest hotel in the world (McWhirter et. al., 1984:179).

Porcupine Mountains Wilderness State Park in Michigan's Upper Peninsula contains the largest virgin hardwood forest in eastern North America west of the Adirondacks (Crispin, 1980:176). The National Park Service has declared the area a Natural Landmark (National Park Service).

Michigan's Upper Peninsula contains over 100 waterfalls. Foremost among them is the Upper Falls of the Tahquamenon River, the second largest waterfall east of the Mississippi River (Upper Peninsula Travel and Recreation Association).

The Mackinac Bridge linking Michigan's Upper and Lower Peninsulas, measured between anchorages, is the longest suspension bridge in the world. The bridge measures 1.58 miles between anchorages and has an overall length of 3.63 miles (McWhirter, et al., 1984:185).

The Pontiac Silverdome, home of the Detroit Lions, has the world's largest air-supported roof (McWhirter, et al., 1984:177).

Michigan has the largest free-roaming elk herd east of the Mississippi River. The herd consists of about 980 animals (Michigan Dept. of Natural Resources, Wildlife Division).

Quantity of Recreation Resources in Michigan

Michigan has more public golf course holes than any other state in the U.S. (National Golf Foundation, 1984:8). See p. 240.

Michigan has 45 downhill ski areas -- more than any other state except New York and Wisconsin (Enzel, 1985). See p. 233.

Michigan ranks fifth in the nation in number of operational state parks and sixth in the nation in total acreage of its state parks (National Association of State Park Directors, n.d.:3). See p. 121.

In Michigan there are 92,803 designated campsites on public and private land (Nelson, Table 13-1 herein).

Michigan's state park system contains more modern campsites than any other state park system in the nation (National Association of State Park Directors, n.d.:5). See p. 121.

Michigan has 36,050 miles of stream (Brown, 1944) and 10,188 lakes and ponds five or more acres in size (Humphreys, et. al., n.d.:4).

Michigan is the only state that borders on four of the five Great Lakes. Its 3,251-mile Great Lakes shoreline is longer than the freshwater shoreline of any other state (Sommers, 1977:1, 18).

Michigan has four Great Lakes bottomland preserves totaling 825 square miles in area. These preserves contain several hundred 19th and early 20th Century shipwrecks which provide an abundance of recreational diving experiences (Michigan Dept. of Natural Resources, Land Resource Programs Division).

Recreational use of Michigan's water resources is facilitated by 746 Great Lake marinas that contain 36,651 slips (Holecek and Brothers, 1983), 1,353 public access sites (Michigan Dept. of Natural Resources, 1985a), and 85 recreational harbors on the Great Lakes (Michigan Dept. of Natural Resources, 1985b:1).

Michigan contains 7.4 million acres of public land (Michigan Dept. of Natural Resources, 1985c:B-97). This public land includes the 95,455-acre Seney National Wildlife Refuge, over a quarter of which is in the National Wilderness Preservation System (U.S. Fish and Wildlife Service, n.d.:20). See p. 115.

In 1981, Michigan's public lands contained about 3,500 miles of snowmobile trails and 1,000 miles of cross-country ski trails (Michigan Dept. of Natural Resources, Recreation Services Division). See p. 231.

In 1980, there were 215,958 temporary residences in Michigan--more than any other state except Florida (U.S. Bureau of the Census, 1983: Table 71). "Temporary residences" means second homes, rental cabins, rental cottages, and housing units for migratory laborers. See p. 97.

Travel Promotion and Advertising in Michigan

The Michigan Travel Bureau's 1985-86 total budget of \$11.8 million is the second largest state travel office budget in the nation (U.S. Travel Data Center, 1985:4). See p. 16.

The Michigan Travel Bureau's 1985-86 advertising budget of \$4.3 million is the sixth largest state travel office advertising budget in the nation (Michigan Travel Bureau; U.S. Travel Data Center, 1985:44). See p. 16.

In 1984 Michigan ranked fifth in the nation in advertising expenditures in U.S. measured media (Ogilvy and Mather, 1985:IV-4). See p. 21.

In 1984 the Michigan Travel Bureau conducted 60 press or travel writers' tours--nearly five times more than the national average (N=47) of 12.2 tours (U.S. Travel Data Center, 1985:62). See p. 14.

5.4 million pieces of literature were distributed at Michigan's 11 highway welcome centers in 1984 (Michigan Dept. of Transportation, n.d.:12). See p. 30.

Amount of Outdoor Recreation That Takes Place in Michigan

Michigan's state park system, which annually receives over 20 million visitors, is one of the most heavily visited state park systems in the nation. In Fiscal Year 1983-84 Michigan's state park system ranked ninth in the nation in number of day visitors, third in number of overnight visitors, and eighth in total number of visitors (National Association of State Park Directors, n.d.:6). See p. 136 and p. 122.

In 1980 Michigan's registered boat owners logged 16.9 million recreational boat-days (Stynes and Safronoff, 1982:79). See p. 174.

Michigan ranks among the top five states in the nation in the number of angler-days that its residents logged in 1980, the number of angler-days that nonresidents logged in 1980, and the number of angler-days that residents plus nonresidents logged in 1980 (U.S. Fish and Wildlife Service and U.S. Bureau of the Census, 1982:100).

In FY1984, 912,119 individuals received hunting licenses issued by the state of Michigan--more than the number of individuals that received hunting licenses issued by any other state except Pennsylvania and Texas (U.S. Fish and Wildlife Service).

Michigan ranks among the top five states in the nation in the total number of hunter-days that took place within its borders in 1980 (U.S. Fish and Wildlife Service and U.S. Bureau of the Census, 1982:103).

Michigan's residents rank among the top five state populations in the nation in the number of hunter-days they logged big game hunting, small game hunting, and hunting in general (U.S. Fish and Wildlife Service and U.S. Bureau of the Census, 1982:96).

Private Investment in and Spending on Recreation in Michigan

Michigan has more numbered boats than any other state (U.S. Coast Guard, 1985:8). See p. 166.

Michigan has more registered snowmobiles than any other state (International Snowmobile Industry Association). See p. 230.

Michigan ranks fourth in the nation in the number of recreation vehicle shipments it received in 1984 (Recreation Vehicle Industry Association, 1985:9). See p. 155.

Michigan leads the nation in the sale of marine accessories, and ranks fourth in the sale of boats (National Marine Manufacturers Association, n.d.:6, 7). See p. 183.

In 1981, registered Michigan boat owners spent over a billion dollars on boating in Michigan (Stynes, et. al., 1983:iii).

Michigan ranks among the top five states in the nation in expenditures by anglers, and in expenditures by hunters (U.S. Fish and Wildlife Service and U.S. Bureau of the Census, 1982:101).

Nationally-Distributed Recreation Products Manufactured in Michigan

SMI, Inc., of Midland, Michigan is the nation's largest manufacturer of snowguns (SMI, Inc.)

The Iverson Snowshoe Company of Shingleton, Michigan handmakes snowshoes that are used by recreationists, trappers, park rangers, and professional conservationists from Maine to Alaska (Iverson Snowshoe Company).

The Sawyer Canoe Company of Oscoda, Michigan manufactures canoes that are distributed throughout the United States (Sawyer Canoe Co.).

Pioneering Efforts in the Development, Management, and Promotion of Michigan's Recreation and Travel Resources

The nation's first salaried game and fish warden was hired in Michigan in 1887 (Kane, 1981:1263).

The Detroit Convention Bureau, founded in 1896, is the oldest convention bureau in the world (Metropolitan Detroit Convention and Visitors Bureau).

Michigan was one of the first states in the nation to promote tourism. The Northeast Michigan Development Bureau of Bay City (forerunner of the East Michigan Tourist Association), and the Upper Peninsula Development Bureau (forerunner of the Upper Peninsula Travel and Recreation Association), were both established in 1910 (McIntosh, 1982:23).

Michigan constructed the nation's first travel information center in 1935 on US-12, south of New Buffalo. A second travel information center, completed in Menominee in 1937, is the oldest facility of its kind in continuous operation in the U.S. (Michigan Department of Transportation; Michigan Department of Transportation, 1985:36).

Michigan constructed the nation's first roadside park in 1935 on M-43 east of Lansing (Michigan Department of Transportation; Michigan Department of Transportation, 1985:36).

Michigan was the first state to provide highway users with roadside picnic table sites (Michigan Department of Transportation, 1985:36).

One of the nation's first college curriculums in park management was established in 1935 at Michigan State University (LaGasse and Cook, 1965:24)¹

¹The first college curriculum in park management in the English-speaking world was established at Syracuse University in 1912 (LaGasse and Cook, 1965:19).

Literature Cited

- Brown, C.J.D. 1944. "Michigan Streams - Their Lengths, Distribution and Drainage Areas." Michigan Conservation. 13(5):9-10.
- Crispin, Susan R. 1980. "Nature Preserves in Michigan, 1920-1979." The Michigan Botanist. 19(3):99-244.
- Enzel, Robert G. 1985. The White Book of Ski Areas: United States and Canada. Washington, D.C.: Inter-Ski Services, Inc.
- Holecek, Donald F. and Gene L. Brothers. 1983. Documentation and Analysis of Temporal and Spatial Changes in Marinas Serving Michigan's Great Lakes. Report prepared for Waterways Division and Land Resource Programs Division, Michigan Dept. of Natural Resources. East Lansing: Dept. of Park and Recreation Resources, Michigan State University.
- Humphreys, C.R., Jordan Tsolakides, Jack A. Donnan, and Joyce Colby. n.d. Selected Data from Lake Inventory Bulletins 1-83. Water Bulletin No. 16, Dept. of Resource Development and Agricultural Experiment Station, Michigan State University. East Lansing.
- Kane, Joseph Nathan. 1981. Famous First Facts: A Record of First Happenings, Discoveries, and Inventions in American History. Fourth edition. New York: H. W. Wilson Company.
- LaGasse, Alfred B. and Walter L. Cook. 1965. History of Parks and Recreation. American Institute of Park Executives Management Aids Bulletin No. 56. Wheeling, WV: American Institute of Park Executives.
- McIntosh, Robert W. 1982. "Michigan Tourism - A Historical Perspective." In Fridgen, J.D. and D.J. Allen (eds.). Michigan Tourism: How Can Research Help? Symposium Proceedings, Special Report #6, Agricultural Experiment Station, Michigan State University. East Lansing.
- McWhirter, Norris, David A. Boehm, Maris Cakars, Cyd Smith, and Jim Benagh (eds.). 1984. 1985 Guinness Book of World Records. New York: Sterling Publishing Co.
- Michigan Dept. of Natural Resources. 1985a. "Public Access Site Master List." Lansing, MI: Michigan Dept. of Natural Resources, Waterways Division.
- Michigan Dept. of Natural Resources. 1985b. Michigan Harbors Guide. Lansing, MI: Michigan Dept. of Natural Resources, Waterways Division.
- Michigan Dept. of Natural Resources. 1985c. "1985 Michigan Recreation Plan Public Review Draft, Appendix B." Lansing, MI: Michigan Dept. of Natural Resources, Recreation Services Division.
- Michigan Department of Transportation. 1985. Travel Information/Welcome Center Programs: A National Survey. Lansing, MI: Michigan Dept. of Transportation.
- Michigan Department of Transportation. n.d. Travel Information Section 1984 Annual Report. Management Services Division Report #383. Lansing, MI: Michigan Dept. of Transportation.

- National Association of State Park Directors. n.d. Annual Information Exchange 1985. Indianapolis, IN: Indiana Dept. of Natural Resources, Division of State Parks.
- National Golf Foundation. 1984. Statistical Profile of Golf in the United States: 1984 Annual Review. North Palm Beach, FL: National Golf Foundation.
- Ogilvy and Mather Partners. 1985. Trends in Travel and Tourism Advertising Expenditures in United States Measured Media 1980-1984. New York: Ogilvy and Mather Partners, Inc.
- Recreation Vehicle Industry Association. 1985. RVs...America's Family Camping Vehicles: A Year-end Report, 1984. Reston, VA: Recreation Vehicle Industry Association.
- Sommers, Lawrence M. (ed.). 1977. Atlas of Michigan. East Lansing, MI: Michigan State University Press/Wm. B. Eerdsman Publishing Co.
- Stynes, Daniel J. and David Safronoff. 1982. 1980 Michigan Recreational Boating Survey. Michigan Sea Grant Publication MICHU-SG-82-202. Ann Arbor, MI: Michigan Sea Grant Publications.
- Stynes, Daniel J., Gene L. Brothers, Donald F. Holecek, and Dave Verbyla. 1983. Spending Patterns and Economic Impacts of Michigan Registered Boat Owners. Michigan Sea Grant Publication MICHU-SG-83-210. Ann Arbor, MI: Michigan Sea Grant Publications.
- U.S. Bureau of the Census. 1983. U.S. Census of Housing, 1980. Volume 1, Characteristics of Housing Units, Chapter A, General Housing Characteristics, Part 1, United States Summary, HC80-1-A1. Washington, D.C.: U.S. Government Printing Office.
- U.S. Coast Guard. 1985. Boating Statistics 1984. Washington, D.C.: U.S. Coast Guard.
- U.S. Fish and Wildlife Service. n.d. Annual Report of Lands Under the Control of the U.S. Fish and Wildlife Service as of September 30, 1984. Washington, D.C.: U.S. Fish and Wildlife Service.
- U.S. Fish and Wildlife Service and U.S. Bureau of the Census. 1982. 1980 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. Washington, D.C.: U.S. Government Printing Office.
- U.S. Travel Data Center. 1985. Survey of State Travel Offices 1985-1986. Washington, D.C.: U.S. Travel Data Center.

CHAPTER 3

TRAVEL PROMOTION AND ADVERTISING IN MICHIGAN

Daniel M. Spotts

Introduction

Millions of dollars are spent each year to entice travelers to visit Michigan. The magnitude of these expenditures clearly warrants an examination of this critical component of Michigan's travel and tourism system. This chapter presents an overview of travel promotion and advertising in Michigan by: (1) describing the organizational framework in which these activities take place, (2) comparing the budgets and advertising expenditures of the Michigan Travel Bureau with those of competing state and provincial travel offices, and (3) discussing travel advertising at Michigan's highway welcome centers.

Organizational Framework

Travel promotion and advertising in Michigan takes place at the state level, at a regional level, and at a local level. The Michigan Travel Bureau is responsible for promotion and advertising at the state level. In fulfilling this responsibility the Bureau conducts familiarization tours for press and travel writers, attends travel shows, works with group travel organizations, directs a paid advertising program in conjunction with its current advertising agency, Ross Roy, Inc., and engages in a host of other activities.

The Bureau's involvement in familiarization tours for press and travel writers is quite extensive compared to other state travel offices in the Great Lakes region. In 1983 the Michigan Travel Bureau conducted 30 such tours--five times more than any other state in the region and triple the national average (Table 3-1). Similarly, in 1984 the Bureau conducted 60 tours--over five times more than any other state in the region and nearly five times more than the national average.

Table 3-1. Number of press or travel writers tours conducted by Michigan Travel Bureau versus equivalent agencies in surrounding states, 1983 and 1984.

YEAR	MICHIGAN	ILLINOIS	INDIANA	MINNESOTA	OHIO	WISCONSIN	NATIONAL AVERAGE
1983	30	4	2	6	0	4	9.2(N=49)
1984	60	4	1	6	1	11	12.2(N=47)

SOURCE: U.S. Travel Data Center, 1985. Survey of State Travel Offices, annual. Reprinted with permission.

Travel promotion and advertising at the regional level is coordinated by four regional tourist associations (RTAs): the Upper Peninsula Travel and Recreation Association, the West Michigan Tourist Association, the East Michigan Tourist Association, and the Southeast Michigan Travel and Tourist Association. RTAs are composed of member organizations and individuals who are assessed dues which support their Association's

promotion and advertising programs. Grants administered by the Michigan Travel Bureau provide additional financial support for RTAs.

Travel promotion and advertising at the local level is conducted by convention and visitors bureaus, assessment districts, chambers of commerce, counties, cities and villages, and individual businesses. Convention and visitors bureaus provide travelers with information on lodging, entertainment, attractions, and events in their respective communities, and help arrange business meetings and conventions. Convention and visitors bureaus in Michigan are located in Ann Arbor, Battle Creek, Bay City, Detroit, Flint, Grand Rapids, Kalamazoo, Lansing, Midland, Muskegon, Saginaw, Traverse City, and Ypsilanti.

Assessment districts are areas established under Michigan Public Act 59 which levy assessments on the owners of transient facilities for the purpose of raising revenues to promote travel to their respective areas. At present there are eighteen assessment districts in Michigan headquartered in Alpena, Baraga, Bessemer, Detroit, Escanaba, Harbor Springs, Houghton, Ironwood, Jackson, Lansing, Mackinaw City, Marquette, Niles, Ontonagon, Oscoda, St. Ignace, Sault Ste. Marie, and Traverse City.

Chambers of commerce develop and distribute promotional literature, maintain and staff offices which provide information to travelers, and conduct a variety of other promotional activities. Counties, cities, villages, and individual businesses develop promotional literature distributed at chambers of commerce and highway welcome centers and conduct various other activities to promote themselves.

Travel Promotion Budgets

The Michigan Travel Bureau's total FY1985-86 budget is \$11.8 million. This is the second highest state travel office budget in the nation, exceeded only by Illinois' budget of \$15.5 million. The Michigan Travel Bureau's FY1985-86 advertising budget is \$4.3 million, the sixth highest advertising budget in the nation (Table 3-2). The advertising budget figures shown in Table 3-2 include allocations to both advertising production and media purchase.

Table 3-3 shows the media purchase (i.e., paid advertising) budgets of the Michigan Travel Bureau and equivalent agencies in surrounding states. Data on Ohio's paid advertising budget were not available in the source used in constructing this table. However, Ohio's proposed FY1984-85 paid advertising budget was \$2,488,000 (U.S. Travel Data Center, 1985:51). Assuming Ohio's actual budget was similar to this proposed amount, in the Great Lakes region Michigan's FY1984-85 budget of \$2.8 million was exceeded only by Illinois' budget of \$6.9 million. This assessment, however, does not account for Ontario's advertising in the U.S. If one assumes that the proportion of Ontario's FY1984-85 paid advertising budget allocated to U.S. audiences was roughly equal to the \$5.7 million (U.S.) it spent in U.S. measured media in calendar year 1984 (Table 3-7), then in the Great Lakes region Michigan's FY1984-85 paid advertising budget ranked third behind Illinois' and Ontario's.

In FY1984-85 Michigan and Illinois allocated 71% and 85%, respectively, of their paid advertising budgets to broadcast media (radio and television). In contrast, Minnesota and Wisconsin allocated only 27% and 53%, respectively, of their paid advertising budgets to broadcast media, and allocated higher proportions to print media (magazines and newspapers) than either Michigan or Illinois.

Table 3-2. Total proposed budgets and proposed advertising budgets of the nation's state travel offices, Fiscal Year 1985-1986.

Rank	State/ Terr.	Date FY Begins	Total Proposed Budget For FY 1985-86 ^a	Rank	State/ Terr.	Proposed Advertising Budget for FY 1985-86	Rank	State/ Terr.	Proposed Advertising Budget as a % of Total Proposed Budget
1	IL	7/1	\$15,500,000	1	IL	\$10,000,000	1	IL	64.5
2	MI	10/1	11,800,000	2	NY	5,613,000	2	CA	62.2
3	TN	7/1	10,645,900	3	MA	4,705,000	3	MO	61.6
4	NY	4/1	10,600,000	4	FL	4,362,176	4	OH	60.9
5	FL	7/1	9,498,292	5	TN	4,354,480	5	VI	59.6
6	PA	7/1	9,470,000	6	MI	4,300,000	6	NJ	55.8
7	MA	7/1	9,291,564	7	AK	4,030,400	7	UT	54.1
8	AK	7/1	8,274,000	8	CA	3,675,000	8	AZ	53.9
9	HI	7/1	6,564,391	9	VI	3,400,000	9	NC	53.1
10	TX	7/1	6,111,218 ^b	10	NJ	3,376,900	10	NY	53.0
11	NJ	7/1	6,051,000	11	OH	3,300,000	11	MA	50.6
12	SC	7/1	5,920,000	12	NC	3,036,750	12	VA	50.0
13	CA	7/1	5,904,791	13	PA	2,901,200	13	MT	49.9
14	NC	7/1	5,714,250	14	VA	2,515,045	14	AK	48.7
15	VI	10/1	5,700,000	15	UT	2,162,600	15	WV	47.2
16	OH	7/1	5,636,954	16	CO	2,100,289	16	CO	46.7
17	OH	7/1	5,414,780	17	GA	2,100,000	17	FL	45.9
18	MN	7/1	5,181,300	18	MO	1,970,000	18	IA	45.4
19	VA	7/1	5,027,390	19	MN	1,925,000	19	AS	44.6
20	LA	7/1	4,631,569	20	LA	1,507,633	20	TN	40.9
21	CO	7/1	4,500,000	21	AZ	1,468,500	21	RI	40.0
22	UT	7/1	3,993,800	22	HI	1,294,000	22	IN	39.5
23	OK	7/1	3,976,373	23	TX	1,254,892 ^d	23	GA	37.3
24	MD	7/1	3,311,901	24	MD	1,141,861	24	MN	37.2
25	MO	7/1	3,198,686	25	SC	1,100,855	25	MI	36.4
26	AL	10/1	3,158,048	26	IN	1,000,000	26	SD	35.7
27	AR	7/1	3,068,361	26	WV	1,000,000	27	MD	34.5
28	NV	7/1	2,943,298	27	WA	900,000	28	NE	34.3
29	KY	7/1	2,800,000	28	WI	770,000	29	NH	33.9
30	WA	7/1	2,772,000	29	NV	765,000	30	ME	33.6
31	AZ	7/1	2,722,300	30	MT	760,760	31	LA	32.6
32	WY	7/1	2,597,696	31	SD	750,000	32	WA	32.5
33	WI	7/1	2,550,000	32	OK	702,500 ^e	33	PA	30.6
34	IN	7/1	2,532,000	33	NH	633,000	34	WI	30.2
35	GU	10/1	2,300,000	34	AR	575,000	35	ND	28.1
36	NM	7/1	2,267,400	35	WY	558,855	36	KS	27.9
37	WV	7/1	2,116,922	36	AL	525,000	37	NV	26.0
38	MS	7/1	2,100,000	37	KY	500,000	38	VT	25.5
38	SD	7/1	2,100,000	38	NM	480,000	39	CT	23.8
39	NH	7/1	1,865,407	39	IA	460,924	40	OR	23.1
40	ID	7/1	1,670,550	40	GU	458,506	41	WY	21.5
41	MT	6/1	1,525,000 ^c	41	NE	400,000	42	NM	21.2
42	VT	7/1	1,508,000	41	RI	400,000	43	TX	20.5
43	OR	7/1	1,355,056	42	VT	384,000	44	GU	19.9

44	NE	7/1	1,166,630	43	MS	350,000	45	HI	19.7
45	KS	7/1	1,144,260	44	KS	319,559	46	AR	18.7
46	CT	7/1	1,090,247	45	OR	313,200	47	SC	18.6
47	IA	7/1	1,014,964	46	ME	306,071	48	KY	17.9
48	RI	7/1	1,000,000	47	ID	288,875	49	OK	17.7
49	ME	7/1	911,000	48	CT	260,000	50	ID	17.3
50	DE	7/1	865,660	49	AS	217,000	51	MS	16.7
51	ND	7/1	670,000	50	ND	188,000	52	AL	16.6
52	AS	10/1	486,300	51	DE	125,000	53	DE	14.4
	CM	10/1	N.A.		CM	N.A.		CM	N.A.

^aMany figures lack strict comparability. For example, some state travel offices pay rent and utilities, whereas others do not. Also, in some states the state travel office operates welcome centers, whereas in other states welcome centers are operated by a separate state agency. Finally, these figures should not be considered comprehensive measures of a given state's commitment to its travel industry since many states also support their travel industries through their departments of natural resources and/or transportation.

^bTotal proposed budget of the Texas Tourist Development Agency. Tourism also supported by Texas Dept. of Highways and Public Transportation.

^cEstimate includes private sector contributions.

^dProposed advertising budget of the Texas Tourist Development Agency.

^eIncludes \$120,000 of trade-out advertising with media.

SOURCE: U.S. Travel Data Center. 1985. Survey of State Travel Offices 1985-1986. Washington, D.C.: U.S. Travel Data Center. Reprinted with permission.

Table 3-3. Breakdown of paid advertising budgets of Michigan Travel Bureau and equivalent agencies in surrounding states, Fiscal Year 1984-85.

MEDIUM	MICHIGAN		ILLINOIS		INDIANA		MINNESOTA		WISCONSIN	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Magazines	\$ 396,976	14.3	\$ 207,660	3.0	\$ 126,000	31.1	\$ 407,000	30.1	\$ 58,000	10.2
Newspapers	316,876	11.4	830,640	12.0	N.A.	N.A.	435,000	32.2	212,000	37.2
Radio	740,227	26.6	1,245,960	18.0	N.A.	N.A.	0	0.0	185,000	32.4
Television	1,225,648	44.0	4,637,740	67.0	178,495	44.1	360,000	26.7	115,000	20.2
Outdoor	102,656	3.7	0	0.0	N.A.	N.A.	48,000	3.6	0	0.0
Other	0	0.0	0	0.0	N.A.	N.A.	100,000	7.4	0	0.0
Total	\$2,782,383	100.0	\$6,922,000	100.0	\$ 404,495	100.0	\$1,350,000	100.0	\$570,000	100.0
Percentage of advertising directed at in-state residents	30		N.A.		30		19		15	

NOTE: Comparable budget figures for Ohio are not shown in the source. However, the source does show that 60-65% of Ohio's paid advertising during FY 1984-85 was directed at in-state residents.

SOURCE: U.S. Travel Data Center. 1985. Survey of State Travel Offices 1985-86. Washington, D.C.: U.S. Travel Data Center. Reprinted with permission.

Between FY1983-84 and FY1984-85 several changes occurred in the paid advertising budgets of the travel offices in the Great Lakes region (Tables 3-3 and 3-4). Michigan increased its allocation to newspaper, radio, and outdoor advertising, and eliminated its allocation to advertising in the "other" category. Indiana cut its allocation to television advertising by more than half and increased its allocation to magazine advertising by 57%. Wisconsin increased its allocation to television advertising from \$0 to \$115,000, and eliminated the \$67,000 it had allocated to "other" advertising. Minnesota eliminated its allocation to radio advertising and increased its allocations to magazine, newspaper, television, outdoor, and "other" advertising. In particular, Minnesota's allocation to magazine advertising nearly tripled between FY1983-84 and FY1984-85. Minnesota's overall paid advertising budget increased 80% between FY1983-84 and FY1984-85.

Travel Advertising Expenditures

While it is enlightening to compare the advertising budgets of the various state travel offices, these comparisons are somewhat problematic since budgets are subject to change and, in the case of the Great Lakes states, cover fiscal years which begin on different dates (Table 3-2). Consequently it is also worthwhile to compare the actual travel advertising expenditures of each state in the U.S. measured media on a calendar year basis. These expenditures, shown in Table 3-5, were compiled by Ogilvy and Mather Partners from accepted media-measurement sources, namely Media Records, Inc., Leading National Advertisers, Inc., Television Bureau of Advertising, Inc., and the Radio Advertising Bureau, Inc. These sources compile and distribute statistics on advertising expenditures in specific media. For example, Media Records produces statistics on newspaper advertising expenditures in 235 daily and Sunday newspapers in 73 cities, and Leading National Advertisers produces statistics on magazine expenditures in 102 general magazines. Comparisons of the advertising expenditures of the various state travel offices are facilitated by the fact that each office's expenditures were recorded with respect to the same specific media. The expenditure figures shown in Tables 3-5, 3-6, and 3-7 do not include expenditures in non-measured or foreign media.

In terms of advertising expenditures in U.S. measured media, Michigan ranked third in the nation in 1982, fourth in the nation in 1983, and fifth in the nation in 1984 (Table 3-5). Michigan's advertising expenditures were exceeded by New York's and Florida's in all three years. In 1983 Michigan's spending was also surpassed by Alaska's, and in 1984 by Alaska's and Massachusetts', as well as New York's and Florida's.

In 1984 over three-quarters of Michigan's and Ohio's expenditures in U.S. measured media were in broadcast media, and less than a quarter were in print media (Table 3-6). In contrast, less than a quarter of Wisconsin's, Illinois', and Minnesota's expenditures were in broadcast media and over three-quarters were in print media.

Ontario's Travel Advertising

Ontario's advertising expenditures in U.S. measured media totaled \$5.7 million in 1984 (U.S. dollars), more than twice the \$2.5 million spent by Michigan in U.S. measured media in 1984 (Table 3-7). Ontario's expenditures rose 13% from \$5,367,000 in 1982 to \$6,052,000 in 1983, and then declined 6% to \$5,689,000 in 1984. In 1982 and 1983 the majority of Ontario's expenditures were in newspapers, but in 1984 greater attention was given to other media, particularly magazines. Ontario's advertising expenditures in 1983 included a newspaper supplement inserted into 12 American newspapers. This supplement described attractions within distinct regions of the province and suggested specific tours

Table 3-4. Breakdown of paid advertising budgets of Michigan Travel Bureau and equivalent agencies in surrounding states, Fiscal Year 1983-84.

MEDIUM	MICHIGAN		INDIANA		MINNESOTA		OHIO		WISCONSIN	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Magazines	\$ 344,867	13.5	\$ 80,000	17.6	\$146,372	19.5	\$ 20,000	1.0	\$ 79,000	13.8
Newspapers	198,477	7.8	0	0.0	306,996	40.9	181,000	9.0	235,400	41.2
Radio	598,399	23.5	0	0.0	53,851	7.2	876,000	43.5	190,000	33.3
Television	1,169,970	45.9	375,000	82.4	203,753	27.2	900,000	44.7	0	0.0
Outdoor	0	0.0	0	0.0	8,000	1.1	7,000	0.3	0	0.0
Other	235,587	9.3	0	0.0	31,045	4.1	30,000	1.5	67,000	11.7
Total	\$2,547,300	100.0	\$455,000	100.0	\$750,017	100.0	\$2,014,000	100.0	\$571,400	100.0
Percentage of paid advertising directed at in-state residents	20		30		0		75		12	

NOTE: Budget figures for Illinois are not shown in the source. However, the source does show that 50% of Illinois' paid advertising during FY1983-84 was directed at in-state residents.

SOURCE: U.S. Travel Data Center. 1985. Survey of State Travel Offices 1984-1985. Washington, D.C.: U.S. Travel Data Center. Reprinted with permission.

Table 3-5. Travel advertising expenditures of states in U.S. measured media, 1982-1984.

1982			1983			1984		
Rank	State	Expenditures (\$000)	Rank	State	Expenditures (\$000)	Rank	State	Expenditures (\$000)
1	NY	6,116	1	NY	3,605	1	NY	4,299
2	FL	3,933	2	AK	3,604	2	MA	3,002
3	MI	3,169 ^a	3	FL	3,278	3	FL	2,829
4	AK	2,955	4	MI	2,324 ^a	4	AK	2,693
5	NC	1,494	5	VA	1,613	5	MI	2,496 ^a
6	HI	1,480 ^b	6	NC	1,133	6	VA	2,069
7	VA	1,305	7	SC	937	7	CO	1,942
8	PA	845	8	WA	921	8	NJ	1,792
9	UT	635	9	PA	835	9	OH	1,730
10	TX	628	10	NJ	734	10	NC	1,532
11	KY	610	11	TX	710	11	PA	1,486
12	TN	610	12	WI	628	12	TX	1,202
13	SC	602	13	CO	618	13	HI	1,088 ^b
14	GA	439	14	HI	534 ^b	14	SC	1,052
15	MO	431	15	UT	507	15	UT	989
16	LA	402	16	OH	437	16	IL	840
16	OK	402	17	IL	424	17	WI	625
17	CO	377	18	TN	366	18	WA	574
18	WA	340	19	AR	347	19	MN	530
19	IL	338	20	MO	336	20	AZ	478
20	AR	335	21	NE	296	21	TN	418
21	AZ	297	22	KY	295	22	NV	416
22	WI	295	23	AZ	293	23	LA	415
23	AL	289	24	SD	260	24	MD	403
24	NM	263	25	MO	212	25	IN	399
25	NE	258	26	GA	208	26	KY	379
26	MD	254	27	WY	204	27	AL	355
27	OR	246	28	NH	188	28	AR	342
28	WY	194	29	ID	141	29	MO	301
29	NJ	172	30	OR	118	30	NE	275
30	MN	168	31	LA	115	31	GA	260
31	SD	164	32	WV	109	32	OK	254
32	VT	159	33	VT	103	33	WY	250
33	ID	115	33	DC	103	34	NM	235
34	ND	111	34	NM	88	35	MS	215
35	NH	100	35	DE	82	36	VT	206
36	OH	70	36	IN	78	37	NH	196
37	MS	67	37	CT	63	38	CT	194
38	WV	64	38	RI	57	39	SD	180
39	CT	63	39	MT	56	40	RI	150
40	MA	50	40	AL	51	41	MT	143
41	RI	43	41	MN	49	42	OR	121
42	IN	29	42	IA	46	43	WV	120
43	DE	22	43	ND	36	44	ID	116
44	IA	20	44	MA	7	45	IA	100
45	ME	11	45	MS	5	46	DE	93
46	KS	8	45	NV	5	47	ND	63
47	MT	3	46	ME	2	48	ME	2
						48	DC	2

^aIncludes Michigan Travel Association and Council.^bIncludes Co-op advertising.

NOTE: Figures were obtained by Ogilvy and Mather from accepted media-measurement sources. Figures exclude "trade paper" advertising, cooperative advertising except where noted, and advertising in nonmeasured media. No discounts are taken into account.

SOURCES: Ogilvy and Mather Partners, Inc. Trends in Travel and Tourism Advertising Expenditures in United States Measured Media, annual. New York: Ogilvy and Mather Partners, Inc. Reprinted with permission.

Table 3-6. Travel advertising expenditures of Michigan and surrounding states in U.S. measured media, by type of medium, 1983 and 1984.

1983 and 1984														
MEDIUM	1983 EXPENDITURES				1984 EXPENDITURES									
	Michigan ¹		Wisconsin		Michigan ¹		Wisconsin		Illinois		Ohio		Minnesota	
	(\$000)	%	(\$000)	%	(\$000)	%	(\$000)	%	(\$000)	%	(\$000)	%	(\$000)	%
Newspapers ²	236	10.1	567	90.3	274	11.0	441	70.6	564	67.2	130	7.5	456	86.0
Magazines ³	223	9.6	57	9.1	254	10.2	29	4.6	157	18.7	30	1.7	71	13.4
Television	992	42.7	0	0.0	903	36.2	0	0.0	0	0.0	1,005	58.1	0	0.0
Radio	873	37.6	2	0.3	1,062	42.5	155	24.8	118	14.0	543	31.4	3	0.6
Outdoor	0	0.0	2	0.3	3	0.1	0	0.0	1	0.1	22	1.3	0	0.0
Total	2,324	100.0	628	100.0	2,496	100.0	625	100.0	840	100.0	1,730	100.0	530	100.0

¹Includes Michigan Travel Association and Council.

²Figures cover 235 daily and Sunday newspapers in 73 cities.

³Figures cover 102 general magazines.

NOTE: Figures were obtained by Ogilvy and Mather from accepted media-measurement sources. Figures exclude "trade paper" advertising, cooperative advertising, and advertising in nonmeasured media. No discounts are taken into account. 1983 figures for IL, IN, OH, AND MN, and 1984 figures for IN are not shown in source.

SOURCE: Ogilvy and Mather Partners, Inc. 1985. Trends in Travel and Tourism Advertising Expenditures in United States Measured Media 1980-1984. New York: Ogilvy and Mather Partners, Inc. Reprinted with permission.

Table 3-7. Travel advertising expenditures of the province of Ontario in U.S. measured media, 1982-1984.

MEDIUM	1982		1983		1984		PERCENT CHANGE		
	Expenditures (U.S. \$000)	%	Expenditures (U.S. \$000)	%	Expenditures (U.S. \$000)	%	1982- 1983	1983- 1984	1982- 1984
Newspapers ¹	2,812	52.4	3,093	51.1	2,139	37.6	10.0	-30.8	-23.9
Magazines ²	1,447	27.0	1,657	27.4	2,196	38.6	14.5	32.5	51.8
Television	1,016	18.9	1,199	19.8	1,224	21.5	18.0	2.1	20.5
Radio	92	1.7	103	1.7	130	2.3	12.0	26.2	41.3
Outdoor	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0
Total	5,367	100.0	6,052	100.0	5,689	100.0	12.8	-6.0	6.0

¹Figures cover 235 daily and Sunday newspapers in 73 cities.

²Figures cover 102 general magazines.

NOTE: Figures were obtained by Ogilvy and Mather from accepted media-measurement sources. Figures exclude "trade paper" advertising, cooperative advertising, and advertising in nonmeasured media. No discounts are taken into account.

SOURCE: Ogilvy and Mather Partners, Inc. Trends in Travel and Tourism Advertising Expenditures in United States Measured Media, annual. New York: Ogilvy and Mather Partners, Inc. Reprinted with permission.

within these regions. The insert therefore served as both an advertisement and a travel guide. A subsequent telephone survey of 1,000 adults residing in cities covered by the advertising revealed that the supplement was apparently a cost-effective means of attracting Americans to Ontario. Twenty-two percent of those who had seen the insert (or 7% of the sample as a whole) stated that they had taken or planned to take one or more previously unplanned trips to Ontario as a result of reading the insert. The Ontario Ministry of Tourism and Recreation estimated that if 7% of the population covered in the advertising campaign actually did take only one additional trip, then the supplement generated 950,000 extra person-trips to Ontario, \$50 million (Canadian) in additional travel expenditures in Ontario, and \$7.7 million (Canadian) in additional provincial taxes. Since the insert cost \$1.5 million (Canadian) to produce and distribute, about \$33 in travel expenditures in Ontario and \$5 in provincial taxes were generated for every dollar expended in producing and distributing the supplement (Ontario Ministry of Tourism and Recreation, 1983).

Travel Advertising at Highway Welcome Centers

Travel advertising in Michigan involves not only enticing people to choose Michigan as a travel destination, but also encouraging them to increase their length of stay once they are in the state. Highway welcome centers in Michigan play an important role in encouraging greater length of stay by providing travelers with information on specific attractions and accommodations in Michigan. These centers, operated by the Michigan Department of Transportation, provide free literature and other services to travelers. There are presently eleven highway welcome centers in Michigan situated at the principal entrances to the state and at strategic interior locations (Figure 3-1). In 1985 these centers received an estimated 1.8 million visits (Table 3-8).

The number of pieces of literature distributed at Michigan's highway welcome centers has increased from 200,000 in 1962 to 5.4 million in 1984 (Table 3-9). Much of this growth is of course due to increases in the number of centers in operation during this period.

The heavier tourist development in northwest lower Michigan, compared to northeast lower Michigan, is reflected in the heavier advertising it has received at three welcome centers located in the middle of the Lower Peninsula (Table 3-10). At these centers in 1983 there were more than twice as many pieces of literature advertising the west side of northern lower Michigan as there were advertising an equivalent area on the east side of the peninsula. This may be one of many reasons that auto travelers surveyed by MSU at the Clare and Coldwater welcome centers were more inclined to state that they were familiar with northwest lower Michigan versus northeast lower Michigan (Table 3-11).

References

- Coffman, C. DeWitt. 1980. Hospitality For Sale: Techniques of Promoting Business for Hospitality Establishments. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Deale, Cynthia S. 1983. "Auto Travelers' Images of Tourism and Recreation Regions in Michigan: An Exploratory Study." Unpublished Master's thesis, Department of Park and Recreation Resources, Michigan State University. East Lansing.

- Muha, Steven L. 1976. "Evaluating Travel Advertising: A Survey of Existing Studies." Paper presented at the Fifth Annual Educational Seminar for State Travel Officials, Lincoln, Nebraska.
- Nolan, Sidney D., Jr. 1976. "Tourists' Use and Evaluation of Travel Information Sources: Summary and Conclusions." Journal of Travel Research. 14(3): 6-8.
- Ontario Ministry of Tourism and Recreation. 1983. "United States Summary Report: February 1982-June 1983." Toronto, Ontario: Ontario Ministry of Tourism and Recreation, Tourism Marketing Information Services.
- Spotts, Daniel M. and Daniel J. Stynes. 1985. "Measuring the Public's Familiarity With Recreation Areas." Journal of Leisure Research. 17(4):253-265.
- Troncalli, Michael T. and John R. Thompson. 1976. "Relative Importance of Information Sources Used by Travel Opinion Leaders." Journal of Travel Research. 14(4): 11-16.
- U.S. Travel Data Center. 1985. Survey of State Travel Offices 1984-1985. Washington, D.C.: U.S. Travel Data Center.



Figure 3-1. Locations of highway welcome centers in Michigan.

SOURCE: Michigan Dept. of Transportation, Management Services Division.

Table 3-8. Estimated number of persons visiting Michigan's highway welcome centers by month, 1979-1985.

WELCOME CENTER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<u>Clare</u>													
1979	1,962	1,873	2,700	5,036	14,119	27,974	50,727	52,080	27,254	17,147	9,590	4,156	214,618
1980	2,417	2,859	2,842	5,080	12,114	22,461	59,312	58,772	23,216	20,808	9,942	2,542	222,365
1981	2,394	2,378	3,345	5,733	10,257	18,370	53,906	56,787	25,097	19,692	9,111	2,397	209,467
1982	2,112	2,632	3,203	4,980	11,056	19,201	61,128	57,592	29,342	22,717	9,379	2,568	225,910
1983	2,556	3,321	3,403	4,960	13,968	23,550	62,763	55,582	20,258	13,075	5,676	2,256	211,368
1984	2,462	3,190	3,111	5,388	8,262	15,673	24,389	24,453	10,910	8,052	3,431	2,113	111,434
1985	1,932	2,219	2,918	4,859	10,543	17,193	28,921	26,948	10,578	8,620	3,245	2,307	120,283
<u>Coldwater</u>													
1979	4,945	5,184	7,520	11,046	13,483	17,983	27,858	31,090	18,297	10,930	7,823	7,310	163,469
1980	5,491	7,096	9,665	13,567	15,985	26,219	44,737	31,730	17,137	14,643	11,479	11,075	208,824
1981	6,079	6,767	10,115	14,408	21,228	25,217	51,924	39,245	20,386	14,667	13,113	12,459	235,608
1982	6,135	6,754	10,817	19,568	29,521	28,643	50,828	42,552	23,972	13,737	12,385	10,372	255,284
1983	8,722	8,179	12,855	18,177	26,419	46,256	58,545	46,887	25,991	12,310	12,979	11,198	288,518
1984	6,927	8,013	11,965	20,303	26,458	31,750	56,264	61,558	25,814	12,725	8,164	12,751	282,692
1985	6,072	7,452	9,589	13,517	17,870	29,029	33,623	34,681	19,434	16,573	11,785	11,742	211,367
<u>Dundee¹</u>													
1979	1,896	2,008	4,099	7,436	10,322	15,005	24,183	24,443	12,455	6,877	4,144	3,162	116,030
1980	2,599	2,660	4,083	7,713	11,435	17,423	29,849	33,854	16,268	13,006	7,776	5,588	152,254
1981	4,609	3,989	8,056	13,851	15,082	21,268	34,398	34,162	16,334	13,592	7,470	6,590	179,401
1982	4,800	4,900	6,764	7,124	6,876	8,155	12,523	11,959	5,570	4,941	860	0	74,472
1983	3,935	6,745	11,856	16,163	22,602	32,563	50,770	51,860	28,438	18,005	10,498	10,097	263,532
1984	7,679	10,532	11,159	19,454	24,481	38,802	49,863	54,235	22,853	14,293	13,530	13,459	280,340
1985	7,707	6,391	11,051	19,661	20,639	32,208	49,414	48,430	24,170	19,061	11,373	10,453	260,558
<u>Iron Mountain²</u>													
1984	0	0	0	0	0	0	1,932	4,476	1,708	1,235	396	517	10,264
1985	535	499	523	509	1,290	3,421	5,918	5,170	2,721	1,715	492	406	23,199
<u>Ironwood</u>													
1979	739	903	1,004	1,085	1,589	4,474	8,595	9,864	4,302	2,857	981	1,708	38,101
1980	895	909	1,009	1,231	2,355	5,106	11,780	12,135	5,181	3,012	976	1,213	45,802
1981	1,725	1,832	1,695	1,708	2,968	6,161	13,685	11,695	7,100	3,325	1,022	1,262	54,178
1982	742	1,096	1,122	1,062	2,516	5,553	13,212	12,886	5,747	2,712	772	937	48,357
1983	944	1,122	1,036	1,180	2,265	6,592	13,456	11,265	7,787	4,364	931	811	51,753
1984	727	1,080	862	1,405	2,592	6,072	12,772	11,374	6,275	2,906	748	834	47,647
1985	739	741	938	1,222	2,203	5,256	11,318	12,319	6,054	2,613	791	914	45,108
<u>Mackinaw City</u>													
1979	1,066	2,727	3,376	4,170	6,915	12,078	20,875	23,164	12,925	5,244	1,577	1,694	95,811
1980	1,206	1,410	1,705	2,315	6,170	15,819	25,747	28,165	10,276	6,892	1,974	2,095	103,774
1981	1,616	1,874	2,076	4,311	6,430	13,386	27,149	28,167	13,373	6,039	2,165	1,910	108,496
1982	1,326	1,362	1,803	2,523	7,242	16,901	29,703	33,240	13,609	6,556	1,377	1,666	117,308
1983	1,333	1,793	1,763	2,799	7,778	16,569	35,870	34,959	17,231	9,854	1,836	1,535	133,320
1984	1,211	2,557	2,393	3,575	7,457	17,610	35,904	36,682	16,493	9,131	2,016	2,064	137,093
1985	1,328	1,907	2,284	3,590	8,415	18,259	33,999	31,107	14,748	8,374	1,880	1,376	127,767

<u>Menominee</u> ³													
1979	379	344	493	992	1,702	4,070	7,015	7,686	3,130	2,141	812	574	29,338
1980	527	564	710	804	1,759	4,082	9,119	9,834	3,105	2,168	687	714	34,073
1981	756	680	897	1,374	2,334	5,301	9,009	10,678	4,165	2,219	681	644	38,738
1982	463	676	678	1,117	865	2,323	4,920	5,506	1,870	1,096	227	206	19,947
1983	100	234	260	400	750	2,186	10,990	10,711	4,198	2,642	615	353	33,439
1984	405	522	617	927	1,671	4,992	9,940	10,094	4,366	2,286	665	451	36,936
1985	322	406	657	887	2,166	5,393	9,802	7,671	3,861	2,252	581	400	34,398
<u>Monroe</u> ⁴													
1979	6,089	5,066	11,585	16,059	18,361	33,377	51,951	46,761	24,106	14,414	9,690	8,711	246,170
1980	6,271	5,954	9,355	14,073	15,587	33,639	53,395	57,543	30,920	22,166	11,494	8,458	268,855
1981	7,084	7,714	11,461	14,775	19,457	32,616	55,895	60,327	32,994	17,787	12,567	9,215	281,892
1982	9,171	6,963	10,665	14,715	18,909	32,996	47,616	44,029	24,509	18,233	7,302	4,970	240,078
1983	4,266	4,573	7,000	10,570	14,898	31,029	50,668	52,198	30,488	26,050	15,822	11,246	258,808
1984	11,103	15,373	18,170	27,962	33,362	36,514	0	0	0	0	0	0	142,484
1985	Closed	Closed	Closed	Closed	---	26,390	51,146	57,507	33,352	18,180	9,450	7,116	203,141
<u>New Buffalo</u>													
1979	2,154	3,864	9,004	35,098	45,764	69,257	99,837	118,038	65,055	36,610	19,484	15,362	519,527
1980	8,694	8,678	9,795	29,836	53,340	69,074	102,761	124,400	61,516	58,066	25,700	16,548	568,408
1981	13,435	13,488	21,864	38,477	62,408	74,224	105,630	116,776	73,032	58,304	27,522	22,158	627,318
1982	9,974	12,644	23,521	39,160	56,945	71,862	119,219	121,015	70,532	66,699	29,781	20,864	642,216
1983	12,380	15,140	21,378	39,085	64,647	80,690	126,111	114,946	69,720	57,670	27,603	16,155	645,525
1984	11,708	17,711	18,018	33,833	45,809	71,401	118,323	132,999	75,669	50,460	26,871	22,559	625,361
1985	11,509	14,012	29,297	53,855	58,718	75,730	119,782	130,281	61,948	50,919	23,316	21,176	650,543
<u>Port Huron</u>													
1979	908	933	1,744	1,832	2,707	4,705	7,347	7,624	3,763	2,215	1,358	943	36,079
1980	1,024	1,201	1,656	2,009	2,933	5,141	8,751	8,821	3,344	2,697	1,417	991	39,985
1981	1,003	1,028	1,788	2,271	3,203	5,815	9,975	9,474	3,828	2,710	1,378	1,124	43,597
1982	903	1,011	1,826	2,063	3,447	5,477	9,465	9,604	4,193	2,133	1,340	1,125	42,587
1983	1,097	1,385	1,842	2,051	3,336	6,020	11,266	10,296	4,945	3,622	1,405	992	48,257
1984	1,100	1,418	1,771	2,495	3,575	5,961	10,307	10,733	4,748	3,400	1,487	1,125	48,120
1985	1,093	1,053	1,722	2,117	4,007	6,488	10,156	9,468	4,676	3,784	1,367	984	46,915
<u>Sault Ste. Marie</u>													
1979	469	547	827	1,030	2,779	8,038	23,706	28,180	9,319	2,700	627	432	78,654
1980	436	629	99	1,353	3,473	7,691	19,673	22,501	6,868	3,254	668	705	68,050
1981	888	1,033	1,376	1,809	5,437	10,717	28,295	29,580	10,575	3,470	915	667	94,762
1982	552	917	1,062	1,413	3,787	12,430	32,332	35,490	13,791	3,394	903	834	106,905
1983	777	951	1,353	1,671	3,423	9,225	27,307	37,029	10,369	4,790	903	903	98,701
1984	939	1,473	1,414	2,016	2,945	8,711	24,203	31,889	9,734	3,706	604	528	88,162
1985	479	445	590	697	2,612	7,703	25,516	27,639	8,130	2,054	388	317	76,570

¹Temporary location due to reconstruction, April-December 1982.

²Opened in July, 1984.

³Temporary location due to reconstruction, December 1982.

⁴Closed due to construction, July-December 1984.

NOTE: Figures are estimates by welcome center personnel rather than actual counts of persons.

SOURCE: Michigan Department of Transportation, Management Services Division.

Table 3-9. Number of pieces of literature distributed at Michigan's highway welcome centers, 1962-1984.

YEAR	NO. PIECES DISTRIBUTED	NOTES
1962	200,000	
1963	1,500,000	
1964	2,064,000	Monroe center opened replacing 1941 "station"; Ironwood center opened.
1965	2,531,000	Sault Ste. Marie center opened.
1966	2,326,000	
1967	2,517,000	Port Huron center opened.
1968	2,703,000	Clare Center opened.
1969	2,690,000	Coldwater center opened.
1970	2,949,000	
1971	3,089,000	New Buffalo center opened, replacing 1935 "station."
1972	3,490,000	
1973	3,411,758	
1974	3,193,664	
1975	3,113,233	
1976	3,778,898	
1977	4,187,765	
1978	3,940,637	Dundee center opened.
1979	5,389,465	
1980	4,810,047	
1981	4,871,907	
1982	4,572,861	
1983	4,879,837	
1984	5,404,595	Iron Mountain center opened.

SOURCE: Michigan Department of Transportation, Management Services Division.

Table 3-10. Number of pieces of literature advertising northeast lower Michigan versus northwest lower Michigan at selected highway welcome centers.

Highway Welcome Center	Date of Count	NUMBER OF PIECES OF LITERATURE ADVERTISING...	
		Northeast Lower Michigan ¹	Northwest Lower Michigan ²
Coldwater	9/23/83	30	71
Clare	9/1/83	41	113
Mackinaw City	9/3/83	40	86
Totals		111	272

¹Counties of Alcona, Alpena, Arenac, Cheboygan, Iosco, Montmorency, Ogemaw, Oscoda, and Presque Isle. Land area=5,223 square miles.²Counties of Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Mason, Missaukee, and Wexford. Land area=5,230 square miles.

NOTE: Pieces of literature on both regions were included in counts for each region. There were 5 such items at the Coldwater Welcome Center, 9 at the Clare Welcome Center, and 9 at the Mackinaw City Welcome Center. Also included in counts for a given region were items that mentioned places in that region along with mention of places in southern Michigan or the Upper Peninsula.

SOURCE: Unpublished research by Daniel M. Spotts, Department of Park and Recreation Resources, Michigan State University.

Table 3-11. Auto travelers' expressed familiarity with northeast lower Michigan versus northwest lower Michigan.

	TRAVELERS CONTACTED AT CLARE WELCOME CENTER N=440	TRAVELERS CONTACTED AT COLDWATER WELCOME CENTER N=287
Familiar with northeast lower Michigan ¹	50.3%	31.8%
Not familiar with northeast lower Michigan	<u>49.7</u>	<u>68.2</u>
Total	100.0%	100.0%
Familiar with northwest lower Michigan ²	77.1%	45.9%
Not familiar with northwest lower Michigan	<u>22.9</u>	<u>54.1</u>
Total	100.0%	100.0%

¹Alcona, Alcona, and Iosco counties.

²Antrim, Leelanau, Benzie, Manistee, and Grand Traverse counties.

SOURCE: Deale, Cynthia S. 1983. "Auto Travelers' Images of Tourism and Recreation Regions in Michigan: An Exploratory Study." Unpublished Master's Thesis, Department of Park and Recreation Resources, Michigan State University.

CHAPTER 4

SELECTED INDICATORS OF TRAVELER FLOWS

Daniel M. Spotts

Introduction

Many planning and marketing decisions in the travel and tourism industry require an understanding of patterns and trends in traffic volumes. To provide some assistance with such decisions, this chapter documents the volume of highway and air travel at various locations throughout the state.

Three types of indicators are presented in this chapter: (1) the actual number of vehicles counted at specific highway locations during a given month or year, or "raw traffic counts," (2) adjusted average daily traffic counts during a given month or year, and (3) the number of air passengers utilizing air carrier airports. Raw traffic counts are useful in documenting the total volume of traffic at a given location. However, comparisons of such counts across months are somewhat problematic because differences in the counts may be due to disparities in the number of weekend days in one month versus another, especially since much tourist travel takes place on weekends. Similar difficulties result from leap years and holiday weekends that may be wholly within a month in one year but only partially within that month in another year (e.g., Labor Day weekend 1984 vs. 1985). Because of these problems, it is advantageous to use adjusted average daily traffic counts (ADTs) in making comparisons of traffic volumes across months or years. ADTs are derived by calculating the average traffic volume occurring on weekdays, Saturdays, and Sundays within a given time period, such as a month or year, and then inserting these values in the following formula:

$$ADT_i = \frac{(\text{average weekday}_i \times 5) + \text{average Saturday}_i + \text{average Sunday}_i}{7}$$

where i = time period

By averaging traffic volumes on both weekdays and weekends, this procedure tends to ameliorate the effects of disparities in the number of weekend days occurring in one time period versus another. Another advantage of ADTs over raw counts is that they are smaller numbers that are easier to work with, particularly when one is dealing with yearly data.

Patterns and Trends in Traffic Volume

Mackinac Bridge crossings are a familiar indicator of traffic volume in Michigan's travel and tourism industry. The total number of vehicles crossing the Mackinac Bridge has increased from 1.4 million in 1958 to 2.6 million in 1985 (Table 4-1). This growth has been gradual, and in general changes in the volume of crossings from one year to the next have not exceeded $\pm 10\%$. Consistency in crossings is also evident in the nearly equal volume of northbound and southbound traffic over time (Table 4-2), and in the

Table 4-1. Total number of vehicles crossing the Mackinac Bridge, 1957-1985 (raw counts).

Year	Total Number of Vehicles	Percent Change From Previous Year
1957 (Nov/Dec)	140,518	---
1958	1,390,390	---
1959	1,245,887	-10.4
1960	1,179,083	-5.4
1961	1,098,828	-6.8
1962	1,143,201	+4.0
1963	1,198,566	+4.8
1964	1,251,643	+4.4
1965	1,328,641	+6.1
1966	1,418,202	+6.7
1967	1,400,292	-1.3
1968	1,506,789	+7.6
1969	1,836,383	+21.9
1970	1,947,862	+6.1
1971	2,090,492	+7.3
1972	2,174,664	+4.0
1973	2,254,439	+3.7
1974	2,138,298	-5.1
1975	2,285,784	+6.9
1976	2,391,211	+4.6
1977	2,460,293	+2.9
1978	2,539,620	+3.2
1979	2,293,446	-9.7
1980	2,260,102	-1.5
1981	2,320,542	+2.7
1982	2,295,098	-1.1
1983	2,426,807	+5.7
1984	2,503,603	+3.2
1985	2,583,499	+3.2

SOURCE: Mackinac Bridge Authority.

Table 4-2. Annual adjusted average daily traffic counts for three bridges in Michigan, 1977-1985.

PERMANENT TRAFFIC RECORDER STATION	1977	1978	1979	1980	1981	1982	1983	1984	1985
MACKINAC BRIDGE									
Northbound (2070)	3,460	3,486	3,143	3,114	3,184	3,149	3,309	3,405	3,535
Southbound (2080)	3,367	3,468	3,133	3,063	3,175	3,145	3,331	3,420	3,544
Total (2089)	6,736	6,953	6,282	6,175	6,359	6,291	6,646	6,839	7,074
INTERNATIONAL BRIDGE									
Northbound (2090)	1,466	1,549	1,487	1,676	1,822	1,754	1,986	2,119	2,191
Southbound (2100)	1,459	1,535	1,485	1,669	1,806	1,751	1,978	2,112	2,194
Total (2109)	2,925	3,081	2,972	3,345	3,628	3,502	3,963	4,231	4,388
BLUE WATER BRIDGE									
Eastbound (6090)	4,489	4,180	3,839	4,876	4,832	3,995	4,196	4,383	4,576
Westbound (6100)	4,637	4,274	3,958	4,983	4,854	3,994	4,187	4,324	4,563
Total (6109)	9,126	8,454	7,797	9,860	9,686	7,990	8,382	8,721	9,109

NOTE: Annual ADT_i = [(average weekday_i × 5) + average Saturday_i + average Sunday_i]/7

where i = year

SOURCE: Michigan Department of Transportation, Bureau of Transportation Planning.

regular peaking of overall traffic in July or August, the climax of the summer tourist season (Table 4-3).

Traffic patterns on the International Bridge at Sault Ste. Marie in many ways have been similar to those recorded for the MacLezac Bridge. Total crossings have gradually increased from 686,000 in 1963 to 1.6 million in 1985. Traffic has been generally balanced between northbound and southbound vehicles, and total traffic volume has regularly peaked in July or August (Tables 4-2 and 4-4).

Crossings of the Blue Water Bridge at Port Huron and utilization of the Detroit-Windsor Tunnel have increased in recent years (Tables 4-2 and 4-5). Since International Bridge crossings have also increased, it is clear that the volume of highway travel between Michigan and Ontario has grown. However, a portion of this growth may have been due to an increase in commuter traffic. Moreover, it is impossible to determine solely from these figures whether the net flow of travelers from Canada to Michigan has increased or decreased.

Tables 4-7 and 4-8 present ADTs over time for selected permanent traffic recorder (PTR) stations throughout the state.¹ The figures in Table 4-7 in general reveal fairly constant daily traffic volumes from 1977 through 1985 with declines at most stations during the recessionary years 1979-82. The number of air passengers served by air carrier airports also generally declined during 1979-82 (Figure 4-1; Table 4-9).

Table 4-8 documents the seasonality in daily highway traffic flows at selected locations throughout Michigan. Traffic volumes peaked in July or August at each station that yielded data throughout 1984, but these peaks are more dramatic at some stations than at others.

¹PTR stations, operated by the Michigan Department of Transportation, electronically record traffic flows on selected highways each day. The stations listed in Tables 4-7 and 4-8 include the 10 stations utilized by the Michigan Travel Bureau in its travel monitoring and tracking system. Data for additional stations not included in these tables are available from the Michigan Department of Transportation, Bureau of Transportation Planning.

Table 4-3. Total number of vehicles crossing the Mackinac Bridge by month, 1974-1985 (raw counts).

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1974	57,952	63,572	78,740	101,375	163,395	224,217	375,209	435,113	233,500	176,317	133,693	95,215	2,138,298
1975	67,588	75,353	97,229	96,217	187,158	248,479	412,110	449,562	225,589	188,857	144,677	92,965	2,285,784
1976	71,242	80,496	88,167	132,437	193,662	249,635	435,461	437,198	271,490	197,082	141,809	92,532	2,391,211
1977	71,237	75,258	96,300	138,161	213,092	254,976	448,117	439,808	286,568	189,549	150,934	96,293	2,460,293
1978	67,806	84,467	118,371	120,750	214,174	265,015	452,126	450,884	294,439	211,438	158,346	101,804	2,539,620
1979	73,666	84,809	101,367	131,168	196,562	240,217	360,604	401,940	265,842	187,933	146,479	102,859	2,293,446
1980	76,420	87,828	93,793	125,141	186,366	226,149	376,221	421,480	232,905	193,487	143,953	96,359	2,260,102
1981	79,423	77,799	97,423	132,142	194,928	237,047	397,847	413,616	263,044	185,224	142,556	99,493	2,320,542
1982	66,213	75,974	93,118	117,434	201,100	241,098	401,033	407,328	262,393	191,227	137,769	101,221	2,295,908
1983	80,955	86,064	100,788	133,147	194,977	247,600	425,426	417,845	283,314	212,894	147,497	96,300	2,426,807
1984	81,612	93,801	104,413	142,896	195,799	270,042	415,478	440,979	279,798	208,370	159,240	111,175	2,503,603
1985	84,355	84,740	108,711	136,353	222,276	286,987	437,429	456,180	284,468	216,325	154,816	110,859	2,583,499

SOURCE: Mackinac Bridge Authority.

Table 4-4. Total number of northbound and southbound vehicles crossing the Sault Ste. Marie International Bridge
by month, 1975-1985 (raw counts).

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1975													
Northbound	18,488	20,136	24,089	23,087	38,234	52,487	78,844	86,229	46,224	37,858	26,256	23,578	475,510
Southbound	18,617	20,208	23,466	22,648	35,484	50,098	76,752	86,022	46,877	39,256	26,536	23,528	469,492
Total	37,105	40,344	47,555	45,735	73,718	102,585	155,596	172,251	93,101	77,114	52,792	47,106	945,002
1976													
Northbound	20,664	22,137	23,751	26,955	39,668	50,718	79,097	79,126	52,002	40,137	25,626	24,565	484,446
Southbound	21,015	22,340	23,732	26,458	37,414	50,161	76,910	80,495	52,503	40,945	25,895	24,345	482,213
Total	41,679	44,477	47,483	53,413	77,082	100,879	156,007	159,621	104,505	81,082	51,521	48,910	966,659
1977													
Northbound	22,890	24,239	29,593	31,470	44,832	55,255	88,161	84,374	58,462	40,450	27,991	27,768	535,485
Southbound	23,567	24,464	29,620	30,859	42,214	54,765	85,131	84,813	58,626	41,841	29,386	27,501	532,787
Total	46,457	48,703	59,213	62,329	87,046	110,020	173,292	169,187	117,088	82,291	57,377	55,269	1,068,272
1978													
Northbound	24,325	27,851	32,358	31,384	45,161	56,672	86,945	86,546	62,477	48,021	33,903	29,551	565,194
Southbound	24,880	28,428	33,246	30,870	42,537	55,357	84,610	86,105	63,230	48,610	34,430	29,360	561,663
Total	49,205	56,279	65,604	62,254	87,698	112,029	171,555	172,651	125,707	96,631	68,333	58,911	1,126,857
1979													
Northbound	26,457	27,332	32,475	32,353	44,459	54,871	78,280	79,768	58,058	45,213	31,396	32,047	542,709
Southbound	27,193	27,513	33,185	31,528	41,960	53,388	76,936	80,766	59,489	46,288	31,993	31,704	541,943
Total	53,650	54,845	65,660	63,881	86,419	108,259	155,216	160,534	117,547	91,501	63,389	63,751	1,084,652
1980													
Northbound	28,661	34,356	37,325	53,067	61,072	87,047	91,136	60,655	60,655	52,462	37,805	33,639	614,280
Southbound	29,065	34,339	36,991	36,786	50,813	59,739	84,611	91,909	61,260	53,880	38,002	33,239	610,634
Total	57,726	68,695	74,046	74,111	103,880	120,811	171,658	183,045	121,915	106,342	75,807	66,878	1,224,914
1981													
Northbound	36,490	35,676	42,705	43,010	57,728	62,682	93,236	91,655	67,688	55,191	41,093	37,575	664,729
Southbound	36,774	35,763	42,962	42,264	55,343	60,935	90,763	92,415	68,131	56,386	41,402	37,069	660,207
Total	73,264	71,439	85,667	85,274	113,071	123,617	183,999	184,070	135,819	111,577	82,495	74,644	1,324,936
1982													
Northbound	30,452	36,434	41,202	41,062	57,543	61,192	87,833	85,750	65,420	54,777	38,763	39,621	640,049
Southbound	30,778	36,529	41,296	41,255	55,087	60,225	86,159	86,742	66,184	55,685	39,581	39,457	638,978
Total	61,230	72,963	82,498	82,317	112,630	121,417	173,992	172,492	131,604	110,462	78,344	79,078	1,279,027
1983													
Northbound	36,893	38,666	45,297	44,732	59,154	66,919	98,171	94,883	76,254	65,633	50,090	48,276	724,968
Southbound	37,679	38,938	45,480	45,414	56,598	65,798	96,538	94,886	76,180	66,549	50,379	47,911	722,350
Total	74,572	77,604	90,777	90,146	115,752	132,717	194,709	189,769	152,434	132,182	100,469	96,187	1,447,318
1984													
Northbound	46,112	51,988	58,498	55,195	65,501	72,526	95,143	94,746	74,314	64,282	49,803	47,272	775,380
Southbound	46,577	52,151	58,633	54,500	63,634	72,114	92,968	95,661	74,852	65,210	49,737	46,822	772,859
Total	92,689	104,139	117,131	109,695	129,135	144,640	188,111	190,407	149,166	129,492	99,540	94,094	1,548,239
1985													
Northbound	48,614	48,959	53,538	51,355	65,007	73,997	99,983	103,778	80,360	70,075	54,432	49,655	799,753
Southbound	48,884	49,382	53,827	51,023	64,760	72,795	98,691	104,851	80,910	72,115	54,842	49,511	801,591
Total	97,498	98,341	107,365	102,378	129,767	146,792	198,674	208,629	161,270	142,190	109,274	99,166	1,601,344

SOURCE: Sault Ste. Marie International Bridge Authority

Table 4-5. Usage of the Detroit-Windsor Tunnel, 1974-1985
(raw counts).

Fiscal Year ¹	Revenue Vehicles	Percent Change From Previous Year
1974	5,405,642	
1975	5,202,331	-3.8
1976	5,056,690	-2.8
1977	4,968,398	-1.7
1978	5,392,341	+8.5
1979	5,250,899	-2.6
1980	5,875,945	+11.9
1981	6,323,911	+7.6
1982	5,397,841	-14.6
1983	5,585,446	+3.5
1984	5,738,845	+2.7
1985	5,914,294	+3.1

¹ November 1 to October 31.

SOURCE: Detroit and Canada Tunnel Corporation Annual Report, annual.

Table 4-6. Locations of selected permanent traffic recorder stations in Michigan.

PERMANENT TRAFFIC RECORDER STATION	STATION NUMBER	COUNTY	SPECIFIC LOCATION
Champion	1109	Marquette	On US-41 0.1 mile west of M-95
Watersmeet	1249	Gogebic	On US-45 0.1 mile north of US-2
Brevort	2029	Mackinac	On US-2 2.4 miles east of Ozark Rd. in Brevort (19.5 west of I-75)
St. Ignace	2049	Mackinac	On I-75 3.4 miles south of M-123 (north of Castle Rock Rd. BL-75)
Mackinac Bridge	2089	Mackinac	On I-75 at toll gates at north end of bridge
International Bridge	2109	Chippewa	On I-75 at toll gates at south end of bridge
Newberry	2169	Luce	On M-28 0.1 mile west of M-123
Farwell	3029	Clare	On M-115 0.3 mile northwest of Lake Station Ave. (7.0 mi. northwest of US-10)
Baldwin	3109	Lake	On M-37 3.0 miles south of US-10 in Baldwin
Traverse city	3129	Gr. Traverse	On M-37 1.5 miles south of US-31
Alpena	4029	Alpena	On US-23 0.2 miles north of 45th parallel (3.0 south of Alpena)
Rose City	4089	Ogemaw	On M-33 0.2 miles south of Borden Rd. (north of Rose City)
Houghton Lake	4129	Roscommon	On US-27 5.5 miles south of M-55 (south of Snow Bowl Road)
Indian River	4169	Cheboygan	On I-75 0.1 mile north of M-68
Au Gres	4229	Arenac	On US-23 0.5 mile east of Tonkey Road (east of Au Gres)
St. Johns	5029	Clinton	On US-27 0.2 mile south of Colony Road (north of St. Johns)
Pentwater	5129	Oceana	On Old US-31 0.5 mile north of south junction US-31 BR in Pentwater
Morley	5149	Mecosta	On Old US-131 0.5 mile north of 5 mile Road
Port Sanilac	6049	Sanilac	On M-25 4.7 miles south of M-46 (0.3 mile north of Cash Road)
Blue Water Bridge	6109	St. Clair	On I-94 at toll gates at west end of bridge
Birch Run	6129	Saginaw	On I-75 1.9 miles north of M-54, M-83 (at Maple Road overpass)
Carrollton	6229	Saginaw	On I-75 0.1 mile northwest of north junction I-675
Buchanan	7129	Berrien	On Niles-Buch. Rd. 0.4 mile west of Mayflower Rd. (3.2 mile west of US-12 BR)
Marshall	7169	Calhoun	On I-94 7.0 miles east of I-69 (0.3 miles west of 22 Mile Road)
New Buffalo	7189	Berrien	On I-94 1.6 miles north of US-12 (0.6 miles south of Union Pier Rd.)
New Hudson	8209	Oakland	On I-96 at South Hill Road (8.0 miles east of US-23)

SOURCE: Michigan Department of Transportation, Bureau of Transportation Planning. n.d. "Permanent Traffic Recorder Station List."

Table 4-7. Annual adjusted average daily traffic counts for selected permanent traffic recorder stations, 1977-1985.

PERMANENT TRAFFIC RECORDER STATION	1977	1978	1979	1980	1981	1982	1983	1984	1985
Champion (1109)	N.A.	3,804	3,506	3,164	N.A.	3,179	3,188	3,286	3,376
Watersmeet (1249)	1,431	1,514	1,455	1,381	1,389	1,342	1,386	N.A.	N.A.
Brevort (2029)	3,011	3,114	2,682	2,646	N.A.	2,478	2,738	2,799	2,805
St. Ignace (2049)	4,474	4,635	4,214	4,178	4,181	4,143	4,273	4,400	4,693
Mackinac Bridge (2089)	6,736	6,953	6,282	6,175	6,359	6,291	6,646	6,839	7,074
International Bridge (2109)	2,925	3,081	2,972	3,345	3,628	3,502	3,963	4,231	4,388
Newberry (2169)	3,267	3,456	3,186	3,012	2,859	2,791	2,807	N.A.	N.A.
Farwell (3029)	3,806	3,992	3,858	3,759	3,718	3,758	3,974	N.A.	N.A.
Baldwin (3109)	5,021	5,083	4,737	4,631	4,606	4,659	4,775	N.A.	N.A.
Traverse City (3129)	N.A.	N.A.	N.A.	6,428	6,560	6,359	6,769	N.A.	7,371
Alpena (4029)	5,433	5,462	5,361	5,121	4,806	4,735	4,970	5,211	5,257
Rose City (4089)	3,359	3,512	3,312	3,213	3,159	3,177	3,210	3,197	3,282
Houghton Lake (4129)	5,898	6,076	5,545	5,385	5,431	5,325	5,605	N.A.	6,077
Indian River (4169)	5,395	5,622	4,974	5,073	5,055	5,191	4,982	5,459	N.A.
Au Gres (4229)	N.A.	N.A.	4,925	4,783	4,783	4,831	4,902	4,868	N.A.
St. Johns (5029)	14,465	15,022	14,692	13,622	13,699	13,875	14,432	15,065	15,645
Pentwater (5129)	4,493	4,817	4,514	3,921	1,226	N.A.	N.A.	N.A.	N.A.
Morley (5149)	7,364	7,731	7,514	6,912	2,740	N.A.	N.A.	N.A.	N.A.
Port Sanilac (6049)	2,809	2,941	2,658	2,626	2,575	2,646	2,752	2,872	2,946
Blue Water Bridge (6109)	9,126	8,454	7,797	9,860	9,686	7,990	8,382	8,721	9,109
Birch Run (6129)	30,411	31,689	30,629	28,647	29,160	28,960	29,840	30,989	33,153
Carrollton (6229)	35,356	36,378	35,839	33,102	33,804	32,917	33,893	N.A.	39,856
Buchanan (7129)	5,316	5,501	5,274	3,498	2,545	2,548	2,730	2,479	2,843
Marshall (7169)	17,700	18,109	17,267	16,349	16,681	16,423	17,267	18,683	18,871
New Buffalo (7189)	19,830	19,914	18,503	18,024	N.A.	N.A.	N.A.	N.A.	N.A.
New Hudson (8209)	46,541	N.A.	54,076	49,513	50,170	50,082	52,371	53,164	59,090

NOTE: These counts include traffic from both directions.

Annual adjusted average daily traffic count_j = [(average weekday_j x 5) + average Saturday_j + average Sunday_j]/7
where j = year

SOURCE: Michigan Department of Transportation, Bureau of Transportation Planning.

Table 4-8. Adjusted average daily traffic counts for selected permanent traffic recorder stations by month, 1984.

PERMANENT TRAFFIC RECORDER STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	ANNUAL
Champion (1109)	2,006	2,354	2,256	2,654	3,386	3,985	5,046	5,199	3,987	3,244	2,938	2,333	3,286
Watersmeet (1249)	910	993	1,002	1,124	1,497	1,850	2,391	2,177	1,665	1,379	1,077	N.A.	N.A.
Brevort (2029)	1,068	1,247	1,358	2,147	2,662	3,683	5,300	5,718	3,672	2,837	2,596	1,233	2,799
St. Ignace (2049)	2,122	2,482	2,527	3,115	4,183	5,690	7,910	8,471	5,905	4,406	3,288	2,596	4,400
Mackinac Bridge (2089)	2,627	3,238	3,377	4,743	6,358	8,926	13,409	14,325	9,190	6,778	5,334	3,567	6,839
International Bridge(2109)	3,012	3,597	3,751	3,673	4,183	4,785	6,084	6,156	4,945	4,190	3,329	3,018	4,231
Newberry (2169)	1,858	2,209	2,233	2,590	3,038	3,771	N.A.	N.A.	3,770	3,148	2,267	1,822	N.A.
Farwell (3029)	2,400	2,576	2,652	3,264	4,161	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Baldwin (3109)	2,552	2,941	2,904	4,126	5,503	5,280	7,553	N.A.	N.A.	4,771	4,593	N.A.	N.A.
Traverse City (3129)	5,050	5,588	5,905	8,189	N.A.	7,612	N.A.	N.A.	N.A.	7,191	6,508	6,052	N.A.
Alpena (4029)	3,972	4,224	4,394	5,030	5,472	5,649	6,204	6,412	5,657	5,699	5,158	4,628	5,211
Rose City (4089)	1,773	1,972	1,826	2,483	3,445	3,588	4,827	4,690	3,686	3,766	4,187	2,146	3,197
Houghton Lake (4129)	4,152	4,157	N.A.	N.A.	6,612	7,870	9,980	10,270	6,752	5,676	5,206	3,635	N.A.
Indian River (4169)	2,094	2,496	2,498	3,467	5,108	7,230	10,476	10,716	7,758	5,223	4,776	3,561	5,459
Au Gres (4229)	2,932	3,196	3,271	4,976	5,053	5,474	7,459	7,691	6,121	5,282	4,076	2,928	4,868
St. Johns (5029)	11,227	11,898	12,088	13,632	15,523	17,040	18,652	19,637	17,009	16,214	15,256	12,627	15,065
Pentwater (5129)	817	N.A.	N.A.	N.A.	1,431	1,494	N.A.	N.A.	N.A.	1,469	1,408	1,088	N.A.
Morley (5149)	2,074	2,228	2,287	2,536	2,799	2,604	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Port Sanilac (6049)	1,686	1,834	1,936	2,548	2,998	3,402	4,363	4,324	3,785	3,102	2,485	1,997	2,872
Blue Water Bridge (6109)	6,437	6,958	7,376	8,222	8,684	9,793	11,628	12,314	9,382	8,822	7,760	7,260	8,721
Birch Run (6129)	20,489	22,088	22,581	26,423	31,507	36,023	42,611	44,535	34,991	33,159	32,299	25,044	30,989
Carrollton (6229)	26,164	27,419	26,485	30,391	37,860	N.A.	N.A.	50,731	N.A.	N.A.	N.A.	31,116	N.A.
Buchanan (7129)	1,874	2,001	2,031	2,310	2,537	2,588	2,758	2,925	2,766	2,702	2,627	2,589	2,479
Marshall (7169)	13,144	14,661	16,243	18,048	19,150	21,621	21,830	23,745	20,709	19,255	18,957	16,835	18,683
New Buffalo (7189)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	30,887	30,424	23,137	19,885	18,997	16,035	N.A.
New Hudson (8209)	46,203	47,170	48,934	51,380	53,984	57,815	56,972	58,376	54,744	55,858	55,121	51,307	53,164

NOTE: These counts include traffic from both directions.

$$\text{Adjusted average daily traffic count}_i = [(\text{average weekday}_i \times 5) + \text{average Saturday}_i + \text{average Sunday}_i] / 7$$

where i = time period

SOURCE: Michigan Department of Transportation, Bureau of Transportation Planning.

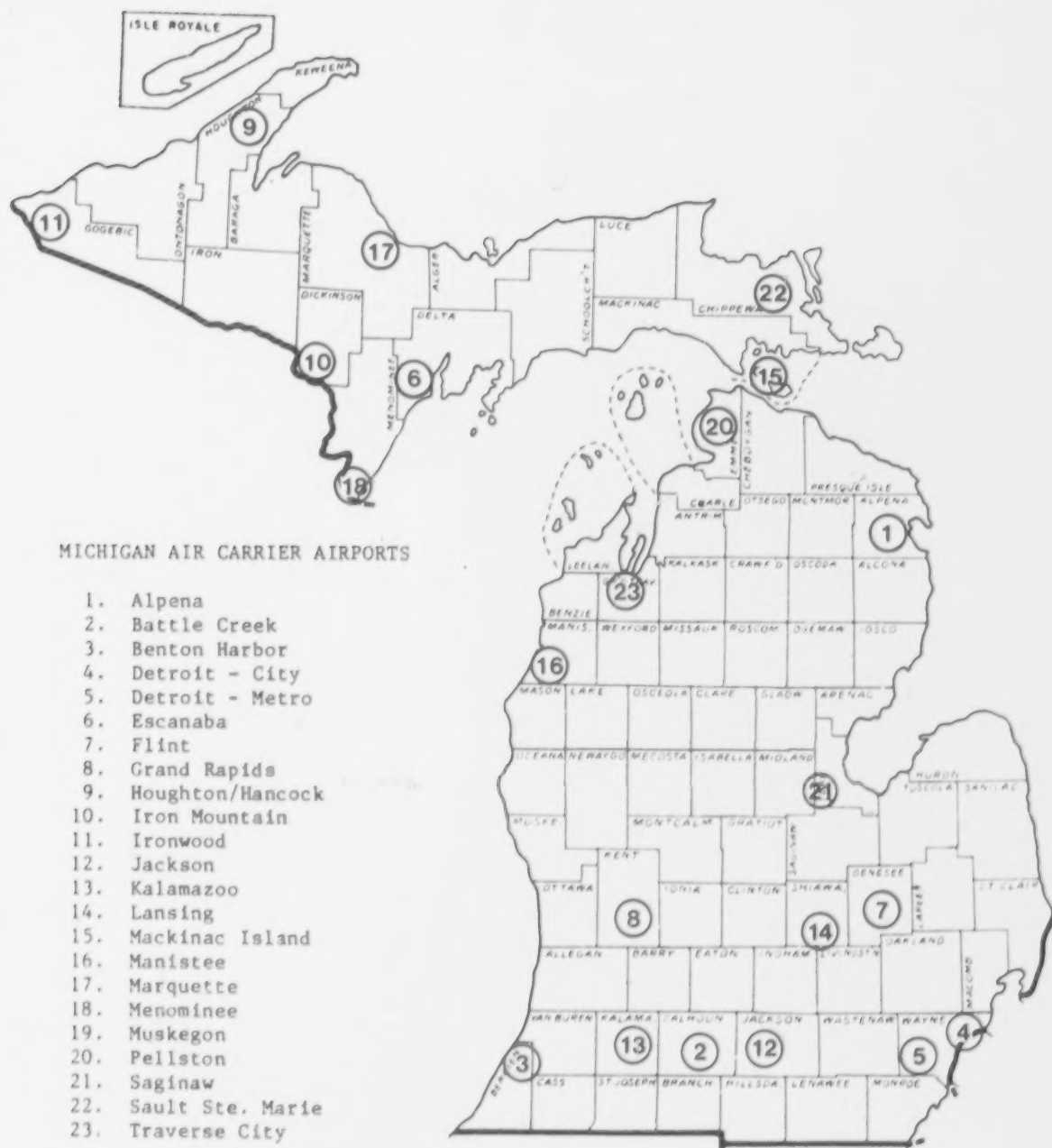


Figure 4-1. Locations of air carrier airports in Michigan, 1985.

SOURCE: Michigan Department of Transportation. 1985. Michigan Air Carrier Airport Statistics. Lansing, MI: Michigan Department of Transportation, Bureau of Transportation Planning.

Table 4-9. Number of deplaned, enplaned, and total passengers at Michigan's air carrier airports, 1979-1985.

CITY	YEAR	PASSENGERS DEPLANED	PASSENGERS ENPLANED	TOTAL PASSENGERS	PERCENT CHANGE FROM PREVIOUS YEAR
ALPENA	1979	13,117	13,020	26,137	
	1980	12,160	12,038	24,198	-7.4
	1981	7,079	7,007	14,086	-41.8
	1982	4,046	3,963	8,009	-43.1
	1983	4,074	4,091	8,165	1.9
	1984	4,196	4,375	8,571	5.0
	1985	5,008	4,985	9,993	16.6
BATTLE CREEK	1979	28,389	28,369	56,758	
	1980	22,959	24,097	47,056	-17.1
	1981	19,614	20,644	40,258	-14.4
	1982	20,348	20,851	41,199	2.3
	1983	18,212	18,698	36,910	-10.4
	1984	18,791	18,940	37,731	2.2
	1985	16,255	17,112	33,367	-11.6
BENTON HARBOR	1979	36,167	37,508	73,675	
	1980	27,700	29,133	56,833	-22.9
	1981	15,003	17,607	32,610	-42.6
	1982	8,498	9,898	18,396	-43.6
	1983	10,673	11,454	22,127	20.3
	1984	13,068	13,749	26,817	21.2
	1985	11,255	11,536	22,791	-15.0
DETROIT-CITY	1979	36,978	38,597	75,575	
	1980	32,767	33,732	66,499	-12.0
	1981	25,922	27,507	53,499	-19.5
	1982	25,856	25,217	51,073	-4.5
	1983	22,868	23,080	45,948	-10.0
	1984	21,286	22,354	43,640	-5.0
	1985	22,352	23,306	45,658	4.6
DETROIT-METRO	1979	5,348,007	5,333,450	10,681,457	
	1980	4,879,263	4,830,851	9,710,114	-9.1
	1981	4,497,667	4,484,880	8,982,547	-7.5
	1982	4,457,037	4,418,887	8,875,924	-1.2
	1983	4,580,235	4,548,393	9,128,628	2.8
	1984	5,654,617	5,643,208	11,297,825	23.8
	1985	N.A.	N.A.	14,487,594	28.2
ESCANABA	1979	21,337	21,471	42,848	
	1980	18,805	21,464	40,269	-6.0
	1981	14,469	16,376	30,845	-23.4
	1982	16,571	15,933	32,504	5.4
	1983	14,797	15,824	30,621	-5.8
	1984	15,160	15,459	30,619	0.0
	1985	10,577	10,865	21,442	-30.0
FLINT	1979	126,360	119,763	246,123	
	1980	87,597	83,880	171,477	-30.3
	1981	55,399	54,031	109,430	-36.2
	1982	45,487	43,286	91,773	-16.1
	1983	83,606	85,005	168,611	83.7
	1984	115,163	118,257	233,420	38.4
	1985	131,891	134,588	267,479	14.6
GRAND RAPIDS	1979	463,136	459,268	922,404	
	1980	420,640	429,341	849,981	-7.9
	1981	356,536	345,810	702,346	-17.4
	1982	366,762	373,477	740,239	5.4
	1983	494,525	491,416	985,941	33.2
	1984	519,085	520,686	1,039,771	5.5
	1985	599,636	595,605	1,195,241	14.9

Table 4-9. Number of deplaned, enplaned, and total passengers at Michigan's air carrier airports, 1979-1985 (continued).

CITY	YEAR	PASSENGERS DEPLANED	PASSENGERS ENPLANED	TOTAL PASSENGERS	PERCENT CHANGE FROM PREVIOUS YEAR
HOUGHTON/HANCOCK	1979	26,081	27,614	53,695	
	1980	24,534	24,796	49,330	-8.1
	1981	20,715	20,895	41,610	-15.6
	1982	18,389	18,727	37,116	-10.8
	1983	21,344	19,939	41,283	11.2
	1984	20,002	19,644	39,646	-4.0
	1985	20,448	21,167	41,615	5.0
IRON MOUNTAIN	1979	17,816	17,883	35,699	
	1980	19,571	18,676	38,247	7.1
	1981	13,020	13,263	26,283	-31.3
	1982	10,095	10,370	20,465	-22.1
	1983	10,336	10,662	20,998	2.6
	1984	10,718	10,845	21,563	2.7
	1985	8,713	8,683	17,396	-19.3
IRONWOOD	1979	12,390	11,796	24,186	
	1980	12,457	11,533	23,990	-0.8
	1981	7,939	8,131	16,070	-33.0
	1982	7,152	6,702	13,854	-13.8
	1983	5,131	5,158	10,289	-25.7
	1984	3,026	3,079	6,105	-40.7
	1985	2,893	2,996	5,889	-3.5
JACKSON	1979	8,341	8,651	16,922	
	1980	6,724	7,277	14,001	-17.6
	1981	3,360	3,767	7,127	-49.1
	1982	1,893	1,994	3,887	-45.5
	1983	1,585	1,429	3,014	-22.5
	1984	1,342	1,103	2,445	-18.9
	1985	1,021	1,029	2,050	-16.1
KALAMAZOO	1979	141,410	141,677	283,087	
	1980	121,492	118,591	240,083	-15.2
	1981	102,040	101,197	203,237	-15.3
	1982	89,563	86,364	175,927	-13.4
	1983	106,162	100,989	207,151	17.7
	1984	124,975	124,684	249,659	20.5
	1985	172,828	168,065	340,893	36.5
LANSING	1979	224,178	220,046	444,224	
	1980	188,151	180,302	368,453	-17.1
	1981	133,038	123,767	256,805	-30.3
	1982	127,315	129,779	257,094	0.1
	1983	177,255	172,858	350,113	36.2
	1984	170,235	163,569	333,804	-4.7
	1985	171,033	172,966	343,999	3.0
MACKINAC ISLAND [†]	1982	946	990	1,936	
	1983	870	881	1,751	-9.6
	1984	630	783	1,413	-19.3
	1985	582	720	1,302	-7.9
MANISTEE	1979	2,867	2,877	5,744	
	1980	2,108	2,416	4,524	-21.2
	1981	1,219	1,555	2,774	-38.7
	1982	665	901	1,566	-43.5
	1983	814	852	1,666	6.4
	1984	834	890	1,724	3.5
	1985	72	97	169	-90.2

Table 4-9. Number of deplaned, enplaned, and total passengers at Michigan's air carrier airports, 1979-1985 (continued).

CITY	YEAR	PASSENGERS DEPLANED	PASSENGERS ENPLANED	TOTAL PASSENGERS	PERCENT CHANGE FROM PREVIOUS YEAR
MARQUETTE	1979	43,092	41,840	84,932	
	1980	34,233	33,718	67,951	-20.0
	1981	28,975	29,610	58,585	-13.8
	1982	26,624	27,255	53,879	-8.0
	1983	32,815	32,942	65,757	22.0
	1984	36,258	35,898	72,156	9.7
	1985	37,039	38,171	75,210	4.2
MENOMINEE	1979	11,183	10,468	21,651	
	1980	9,887	10,211	20,098	-7.2
	1981	4,079	3,959	8,038	-60.0
	1982	2,327	2,206	4,533	-63.6
	1983	1,675	1,494	3,169	-30.1
	1984	1,615	1,571	3,186	0.5
	1985	1,062	1,056	2,118	-33.5
MUSKEGON	1979	86,509	81,159	167,668	
	1980	56,172	53,040	109,212	-34.9
	1981	49,495	50,762	100,257	-8.2
	1982	46,036	48,612	94,648	-5.6
	1983	44,413	44,690	89,103	-5.9
	1984	43,802	43,986	87,788	-1.5
	1985	42,314	44,468	86,782	-1.1
PELLSTON	1979	30,509	30,096	60,605	
	1980	24,482	25,457	49,939	-17.6
	1981	18,304	18,624	36,928	-26.1
	1982	16,648	17,307	33,955	-8.1
	1983	19,731	20,154	39,885	17.5
	1984	20,833	20,706	41,539	4.1
	1985	15,681	14,740	30,421	-26.8
SAGINAW	1979	217,020	229,629	446,649	
	1980	188,190	190,392	378,582	-15.2
	1981	153,173	155,435	308,608	-18.5
	1982	144,413	150,312	294,725	-4.5
	1983	156,801	163,499	320,300	8.7
	1984	158,621	159,014	317,635	-0.8
	1985	188,739	191,981	380,720	19.9
SAULT STE. MARIE	1979	13,828	13,019	26,847	
	1980	10,921	10,736	21,657	-19.3
	1981	6,216	6,457	12,673	-41.5
	1982	5,318	5,569	10,887	-14.1
	1983	4,783	4,969	9,752	-10.4
	1984	3,849	4,195	8,044	-17.5
	1985	5,060	5,017	10,077	25.3
TRAVERSE CITY	1979	82,638	89,060	171,698	
	1980	77,549	78,163	155,712	-9.3
	1981	71,660	73,166	144,826	-7.0
	1982	64,021	65,368	129,389	-10.7
	1983	70,156	68,927	139,083	7.3
	1984	68,828	67,295	136,123	-2.1
	1985	75,458	76,540	149,998	10.2
TOTAL	1979	6,991,393	6,997,261	13,968,654	
	1980	6,278,362	6,229,844	12,508,206	-10.5
	1981	5,604,992	5,584,450	11,189,442	-10.5
	1982	5,506,041	5,486,994	10,993,035	-1.8
	1983	5,883,017	5,847,599	11,730,616	6.7
	1984	7,026,934	7,014,290	14,041,224	19.7
	1985	N.A.	N.A.	17,572,204	25.1

¹Service at Mackinac Island began in 1982.

SOURCE: Michigan Department of Transportation, Aviation Planning Unit.

CHAPTER 5

INTERNATIONAL TRAVEL TO AND FROM MICHIGAN

Daniel M. Spotts

Introduction

Each year Michigan is visited by thousands of travelers from Canada, Mexico, and overseas countries. Since increasing or at least maintaining the flow of such travelers into Michigan presents special marketing challenges, it is important to know something of the character of this segment of the state's travel market. Although data on the preferences, motivations, and personal characteristics of these travelers do not exist, information is at least available on their numbers, origins, and expenditures, and in the case of Canadians, their trip characteristics as well. This chapter summarizes this information and also examines the nature of international travel from Michigan.

International Travel to Michigan

Overseas Travel to Michigan

Overseas tourism in the United States is highly concentrated. Over half of the overseas tourists entering the U.S. in 1984 stated that they were destined for one of only four states: Florida, New York, California, or Hawaii (Table 5-1). During that year 82,007 or only 1.1% of the 7,527,616 overseas tourists entering the U.S. stated that they intended to visit Michigan. Considerably more overseas tourists (152,179) stated Illinois as their destination, fewer stated Ohio (64,985) or Minnesota (34,991), and even fewer stated Wisconsin (29,279) or Indiana (22,098) as their destination. Among all the states and territories of the U.S., Michigan ranked 12th in number of overseas tourists intending to visit it.

Sixty-one percent of the overseas tourists destined for Michigan in 1984 were from Western Europe. Michigan's significant European ethnic population may partially account for this. An additional 16% of the overseas tourists destined for Michigan in 1984 were from Asia, 8% were from the Middle East, and 15% were from other overseas regions (Table 5-2). More specifically, the majority (51%) of the overseas tourists destined for the Wolverine State in 1984 were from five countries: 19% from West Germany, 17% from the United Kingdom, 6% from Japan, 5% from France, and 4% from the Netherlands (Table 5-3).

The total number of overseas tourists destined for Michigan in 1984 increased by 7,521 or 10% over 1983 levels. Tourists from West Germany accounted for most of this increase.

Canadian Travel to Michigan

The "pleasant peninsulas" are of course visited by Canadians as well as overseas tourists. In 1984 the volume of Canadian overnight travel to and through Michigan totaled 819,000 person-visits and 2,092,000 person-nights (Table 5-4). Ninety-two percent of these person-visits were by automobile. Nearly half (48%) involved the renting of a hotel or motel room, and 38% involved the use of a friend's or relative's home for lodging. Forty-two percent of the person-visits involved visiting friends or relatives and

Table 5-1. Relative popularity of states and territories as destinations for overseas tourists, 1984.

RANK	State/ Territory	Number of Overseas Tourists Choosing State/ Territory As A Destination	Percentage of All Overseas Tourists Visiting U.S.	Cumulative Percent
1	Florida	1,222,495	16.2	16.2
2	New York	1,113,663	14.8	31.0
3	California	1,086,104	14.4	45.5
4	Hawaii	768,100	10.2	55.7
5	Guam	284,260	3.8	59.4
6	Texas	195,682	2.6	62.0
7	New Jersey	163,068	2.2	64.2
8	Illinois	152,179	2.0	66.2
9	Massachusetts	151,506	2.0	68.2
10	Pennsylvania	91,068	1.2	69.5
11	Puerto Rico	85,740	1.1	70.6
12	MICHIGAN	82,007	1.1	71.7
13	District of Columbia	79,692	1.1	72.7
14	Washington	75,108	1.0	73.7
15	Connecticut	65,356	0.9	74.6
16	Ohio	64,985	0.9	75.5
17	Virginia	59,463	0.8	76.3
18	Maryland	57,357	0.8	77.0
19	Georgia	54,536	0.7	77.7
20	Louisiana	53,328	0.7	78.5
21	Colorado	40,408	0.5	79.0
22	Minnesota	34,991	0.5	79.5
23	Nevada	34,677	0.5	79.9
24	North Carolina	33,134	0.4	80.4
25	Arizona	33,084	0.4	80.8
26	Oregon	30,344	0.4	81.2
27	Wisconsin	29,279	0.4	81.6
28	Indiana	22,098	0.3	81.9
29	Missouri	21,476	0.3	82.2
30	Tennessee	18,637	0.2	82.4
31	Oklahoma	15,176	0.2	82.6
32	South Carolina	14,897	0.2	82.8
33	Alaska	14,569	0.2	83.0
34	Virgin Islands	14,431	0.2	83.2
35	Alabama	13,228	0.2	83.4
36	Utah	12,737	0.2	83.5
37	Vermont	12,024	0.2	83.7
38	Iowa	11,872	0.2	83.9
39	Rhode Island	11,668	0.2	84.0
40	New Hampshire	11,645	0.2	84.2
41	Kansas	10,904	0.1	84.3
42	Kentucky	9,853	0.1	84.4
43	Maine	8,597	0.1	84.6
44	Delaware	7,857	0.1	84.7
45	New Mexico	6,971	0.1	84.8
46	Nebraska	5,350	0.1	84.8
47	Mississippi	4,967	0.1	84.9
48	Arkansas	4,343	0.1	85.0
49	West Virginia	4,180	0.1	85.0
50	North Dakota	4,146	0.1	85.1
51	Idaho	3,480	0.0	85.1
52	Montana	3,159	0.0	85.2
53	Wyoming	2,079	0.0	85.2
54	South Dakota	2,016	0.0	85.2
	Not Reported	113,642	1.4	100.0
	Total	7,527,616	100.0	

NOTE: "Tourist" is defined as a holder of a B-1 (business) visa, a B-2 (pleasure) visa, an F-1 (student) visa, or an F-2 (family members of students) visa. "Destination" means first intended address in U.S.A.

SOURCE: U.S. Dept. of Commerce, Travel and Tourism Administration. Summary and Analysis of International Travel to the United States, quarterly.

Table 5-2. Number of foreign tourists choosing Michigan as a destination, by region of origin, 1983 and 1984.

Region of Residence	Number of Arrivals in 1983	%	Number of Arrivals in 1984	%	Net Change 1983-1984	Percent Change 1983-1984
Western Europe	41,956	56.3	49,818	60.7	+7,862	+18.7
Eastern Europe	1,078	1.4	1,717	2.1	+639	+59.3
Asia	12,859	17.3	13,095	16.0	+236	+1.8
Middle East	6,772	9.1	6,931	8.5	+159	+2.3
Africa	2,248	3.0	1,920	2.3	-328	-14.6
Oceania	1,887	2.5	2,160	2.6	+273	+14.5
South America	4,481	6.0	3,699	4.5	-782	-17.5
Central America	872	1.2	732	0.9	-140	-16.1
Caribbean	<u>2,333</u>	<u>3.1</u>	<u>1,935</u>	<u>2.4</u>	-398	-17.1
Total Overseas	74,486	100.0	82,007	100.0	+7,521	+10.1
Mexico	3,755	---	5,103	---	+1,348	+35.9

NOTE: "Tourist" is defined as a holder of a B-1 (business) visa, a B-2 (pleasure) visa, an F-1 (student) visa, or an F-2 (family members of students) visa. "Destination" means first intended address in U.S.A. Data on Mexican arrivals reflect only visitors beyond the 40 kilometer border zone.

SOURCE: U.S. Dept. of Commerce, Travel and Tourism Administration, Summary and Analysis of International Travel to the United States, quarterly.

Table 5-3. Number of foreign tourists choosing Michigan as a destination, by selected countries of origin, 1983 and 1984.

Country of Residence	Number of Arrivals in 1983	Number of Arrivals in 1984	Net Change 1983-1984	Percent Change 1983-1984
Japan	4,059	4,837	+778	+19.2
United Kingdom	13,719	14,137	+418	+3.0
West Germany	10,147	15,997	+5850	+57.7
France	3,427	4,085	+658	+19.2
Venezuela	1,368	896	-472	-34.5
Australia	1,524	1,810	+286	+18.8
Italy	2,246	2,624	+378	+16.8
Netherlands	3,611	3,426	-185	-5.1
Switzerland	1,100	1,234	+134	+12.2
Sweden	1,238	1,442	+204	+16.5
Columbia	610	456	-154	-25.2
Brazil	1,354	1,340	-14	-1.0

NOTE: "Tourist" is defined as a holder of a B-1 (business) visa, a B-2 (pleasure) visa, an F-1 (student) visa, or an F-2 (family members of student) visa. "Destination" means first intended address in U.S.A.

SOURCE: U.S. Dept. of Commerce, Travel and Tourism Administration, Summary and Analysis of International Travel to the United States, quarterly.

Table 5-4. Volume and economic impact of Canadian overnight travel to and through Michigan, 1979-1984.

Variable	1979	1980	1981	1982	1983	1984
TOTAL PERSON-VISITS (000)	813	765	749	765	903	819
TOTAL PERSON-NIGHTS (000)	2,059	2,054	2,027	2,007	2,311	2,092
AVERAGE NIGHTS/VISIT	2.54	2.68	2.71	2.62	2.56	2.55
TOTAL SPENDING (Millions of U.S. dollars)	\$ 32	\$ 40	\$ 42	\$ 43	\$ 62	\$ 57
TOTAL PER CAPITA SPENDING (U.S. dollars)	\$38.98	\$52.29	\$56.07	\$56.21	\$68.66	\$70.00
DAILY PER CAPITA SPENDING (U.S. dollars)	\$15.35	\$19.47	\$20.72	\$21.45	\$26.82	\$27.00

NOTE: A "person-visit" is a visit to Michigan by a Canadian on a trip of one or more nights. Michigan may be visited more than once on a given trip and may not be the primary destination of the trip. Data are based on sample surveys of Canadian travelers on overnight trips.

SOURCES: U.S. Dept of Commerce, Travel Service. 1981. A Report on Canadian Tourism to the United States. Washington, D.C.: U.S. Travel Service.

U.S. Dept. of Commerce, Travel and Tourism Administration. Canadian Travel to the United States, annual. Washington, D.C.: U.S. Travel and Tourism Administration.

33% involved pleasure travel. Nearly all (92%) person-visits originated in Ontario versus other parts of Canada. A plurality (39%) of the person-visits took place during the third quarter (Table 5-5). The average Canadian travel party on an overnight trip in Michigan spent 2 or 3 nights in Michigan.

These characteristics of Canadian overnight travel in Michigan have been generally consistent over time, except the volume of travel was somewhat higher in 1983 than in 1984. This post-recession blip may have been the result of pent-up demand during the recession releasing itself in 1983 as the recovery progressed. Attendance at Pictured Rocks National Lakeshore, visitation to the Soo Locks, and day use in Michigan state parks similarly swung up in 1983 and then fell off somewhat in 1984 (Tables 11-2, 11-9, and 12-8).

Economic Impact of International Travel to Michigan

Canadians on overnight trips in Michigan in 1984 spent an estimated \$57 million (U.S.). This is equivalent to about \$70 (U.S.) per person per trip, or \$27 (U.S.) per person per day.

According to the U.S. Travel Data Center, foreign visitors to Michigan as a whole spent \$154.4 million in Michigan (Table 5-6). This figure is conservative because it does not include the expenditures of Canadians on day trips in Michigan. The \$154.4 million figure represents 2.8% of the \$5.545 billion of total travel expenditures in Michigan in 1983, and 1.2% of the total foreign visitor spending in the U.S. (exclusive of spending by Canadian day visitors). Canadians on overnight trips spent 40% of the \$154.4 million total, and other foreigners (except Canadian day visitors) spent the remaining 60% of the total. The U.S. Travel Data Center also reports that the average foreign visitor to Michigan spent between \$100 and \$299 (U.S.) in Michigan, and that these expenditures directly generated 4,300 jobs, \$36.2 million in payroll income, and \$21.1 million in tax revenues.

International Travel from Michigan

While it is certainly worthwhile to know something of the volume and economic impact of foreign travel to Michigan, the "bottom line" from an economic perspective is the extent to which the inflow of traveler dollars from other countries counterbalances the outflow of dollars spent by Michigan residents visiting these countries. It is therefore useful to examine foreign travel from Michigan in concert with foreign travel to Michigan. Passport statistics published by the U.S. Department of State are one indicator of the volume of foreign travel by Michigan residents. These statistics do not provide the critical information on the expenditures of Michiganiens in foreign countries, but they do offer at least a basic understanding of the character of international travel by Michigan residents.

An estimated 123,250 passports were issued to Michiganiens in 1983 (Table 5-7). Since passports are valid for several years, this figure of course represents only a portion of the Michiganiens who could have traveled abroad in 1983. But even if only 123,250 Michiganiens traveled overseas in 1983, this is certainly more than the 74,000 overseas tourists who stated Michigan as their destination upon arrival in the U.S. that year (Table 5-2).

Table 5-5. Number of person-visits to and through Michigan by Canadians on overnight trips, by selected travel-related variables, 1981-1984.

Variable	1981		1982		1983		1984	
	Person-Visits (000)	%	Person-Visits (000)	%	Person-Visits (000)	%	Person-Visits (000)	%
TYPE OF TRANSPORT								
Auto	673.9	90.0	699.1	91.4	796.9	88.3	757.1	92.4
Plane	32.5	4.3	25.3	3.3	29.0	3.2	36.6	4.5
Bus	31.8	4.2	17.2	2.3	39.4	4.4	12.5	1.5
Rail	2.2	0.3	2.5	0.3	3.4	0.4	10.0	1.2
Boat	1.9	0.3	16.9	2.2	4.1	0.4	1.5	0.2
Other	7.0	0.9	3.6	0.5	29.8	3.3	1.5	0.2
Total	749.3	100.0	764.6	100.0	902.6	100.0	819.3	100.0
TYPE OF LODGING								
Camping	53.6	7.2	62.5	8.2	97.7	10.8	75.6	9.2
Owned/rented Apartment	8.8	1.2	11.3	1.5	10.1	1.1	13.8	1.7
Hotel/Motel	297.7	39.7	310.7	40.6	426.6	47.3	391.5	47.8
Home of friend/relative	365.0	48.7	342.1	44.7	344.1	38.1	311.4	38.0
Other/Combination	24.2	3.2	38.0	5.0	24.1	2.7	27.1	3.3
Total	749.3	100.0	764.6	100.0	902.6	100.0	819.3	100.0
PURPOSE OF TRIP								
Business/Convention	83.3	11.1	73.9	9.7	108.2	12.0	116.0	14.2
Visit Relatives/friends	391.3	52.2	370.4	48.4	379.2	42.0	346.8	42.3
Pleasure	183.2	24.5	203.6	26.6	306.0	33.9	267.4	32.6
Other/Combination	91.5	12.2	116.7	15.3	109.2	12.1	89.2	10.9
Total	749.3	100.0	764.6	100.0	902.6	100.0	819.3	100.0
PROVINCE OF RESIDENCE								
Nova Scotia	2.9	0.4	5.0	0.7	2.9	0.3	2.2	0.3
New Brunswick	4.0	0.5	1.9	0.2	1.2	0.1	0.5	0.1
Quebec	17.8	2.4	16.2	2.1	16.7	1.9	16.0	1.9
Ontario	683.9	91.3	700.0	91.6	829.2	91.9	756.6	92.3
Manitoba	15.0	2.0	17.0	2.2	15.8	1.7	16.9	2.1
Saskatchewan	4.6	0.6	6.5	0.9	7.8	0.9	5.9	0.7
Alberta	15.0	2.0	9.8	1.3	15.6	1.7	11.5	1.4
British Columbia	5.9	0.8	5.5	0.7	12.6	1.4	8.7	1.1
Other	0.2	0.0	2.7	0.3	0.8	0.1	0.9	0.1
Total	749.3	100.0	764.6	100.0	902.6	100.0	819.3	100.0
QUARTER VISITED								
January-March	106.2	14.2	94.8	12.4	138.0	15.3	135.0	16.5
April-June	189.1	25.2	196.9	25.8	202.2	22.4	189.2	23.1
July-September	275.6	36.8	298.5	39.0	369.7	41.0	323.4	39.5
October-December	178.4	23.8	174.4	22.8	192.7	21.3	171.7	20.9
Total	749.3	100.0	764.6	100.0	902.6	100.0	819.3	100.0

NOTE: A "person visit" is a visit to Michigan by a Canadian on a trip of one or more nights. Michigan may be visited more than once on a given trip and may not be the primary destination of the trip. Data are based on sample surveys of Canadian travelers on overnight trips.

SOURCE: Statistics Canada, International Travel Section.

Table 5-6. Measures of the direct economic impact of foreign visitors to Michigan, 1983.

DIRECT EXPENDITURES (millions)	
Canadians on overnight trips and Mexican land visitors.....	\$ 62.6
All other foreign visitors	
Public transportation....	\$17.3 (18.8% of \$91.8 million)
Auto transportation.....	\$ 1.9 (2.1% of \$91.8 million)
Lodging.....	\$25.8 (28.1% of \$91.8 million)
Food.....	\$16.3 (17.8% of \$91.8 million)
Entertainment.....	\$ 6.9 (7.5% of \$91.8 million)
Incidentals.....	\$23.6 (25.7% of \$91.8 million)
Sub-total.....	\$ 91.8
Total.....	\$154.4 (1.2% of US total)
AVERAGE SPENDING PER FOREIGN VISITOR.....	
	\$100 - \$299
PAYROLL INCOME GENERATED (millions).....	\$ 36.2
AVERAGE PAYROLL INCOME GENERATED PER DOLLAR OF	
FOREIGN VISITOR EXPENDITURE.....	\$ 0.234
NUMBER OF JOBS GENERATED.....	4,300
AVERAGE VOLUME OF SPENDING REQUIRED TO DIRECTLY	
SUPPORT ONE JOB.....	\$35,907
TAX REVENUES GENERATED (millions)	
Local.....	\$ 2.2 (10.4%)
State.....	\$ 6.7 (31.8%)
Federal.....	\$12.2 (57.8%)
Total.....	\$21.1 (100.0%)
AVERAGE TAX REVENUES GENERATED PER DOLLAR OF	
FOREIGN VISITOR EXPENDITURE	
Local.....	\$.014
State.....	\$.043
Federal.....	\$.079
Total.....	\$.136

SOURCE: U.S. Travel Data Center. 1985. Impact of Foreign Visitors on State Economies, 1983. Washington, D.C.: U.S. Travel Data Center.
Reprinted with permission.

Table 5-7. Number of passport recipients in each state in the U.S., 1983.

Rank	State	No. Passport Recipients in 1983	Percent of All U.S. Passport Recipients	Cumulative Percent	Rank	State	No. Passport Recipients in 1983 per 1,000 Residents
1	CA	625,120	15.2	15.2	1	HI	37.0
2	NY	469,674	11.4	26.6	2	CT	32.0
3	FL	273,570	6.6	33.2	3	DC	31.2
4	NJ	211,190	5.1	38.3	4	MA	29.4
5	TX	204,300	5.0	43.3	5	NJ	28.3
6	PA	179,290	4.4	47.6	6	NY	26.6
7	IL	172,070	4.2	51.8	7	FL	25.5
8	MA	169,340	4.1	55.9	8	CA	24.8
9	OH	138,470	3.4	59.3	9	RI	24.8
10	MI	123,250	3.0	62.3	10	MD	24.5
11	MD	105,460	2.6	64.8	11	AK	23.8
12	VA	105,460	2.6	67.4	12	VT	22.8
13	CT	100,600	2.4	69.8	13	NH	22.1
14	WA	86,250	2.1	71.9	14	DE	21.1
15	WI	74,990	1.8	73.7	15	WA	20.0
16	MN	74,250	1.8	75.5	16	CO	19.7
17	NC	64,400	1.6	77.1	17	VA	19.0
18	CO	62,090	1.5	78.6	18	MN	17.9
19	MO	60,050	1.5	80.1	19	UT	17.5
20	GA	59,780	1.5	81.5	20	NV	16.9
21	IN	57,250	1.4	82.9	21	ME	16.1
22	LA	46,490	1.1	84.0	22	WI	15.8
23	AZ	45,170	1.1	85.1	23	OR	15.8
24	OR	41,990	1.0	86.1	24	AZ	15.2
25	TN	41,560	1.0	87.2	25	PA	15.1
26	OK	39,780	1.0	88.1	26	IL	15.0
27	HI	37,640	0.9	89.0	27	NM	13.8
28	IA	36,000	0.9	89.9	28	MI	13.6
29	SC	34,700	0.8	90.7	29	OH	12.9
30	AL	32,150	0.8	91.5	30	MT	12.9
31	KY	30,460	0.7	92.3	31	TX	12.9
32	KS	29,380	0.7	93.0	32	IA	12.4
33	UT	28,290	0.7	93.7	33	WY	12.3
34	RI	23,720	0.6	94.2	34	KS	12.1
35	NH	21,200	0.5	94.8	35	MO	12.1
36	DC	19,430	0.5	95.2	36	OK	12.0
37	NM	19,370	0.5	95.7	37	NE	11.7
38	NE	18,610	0.5	96.1	38	ID	11.1
39	ME	18,440	0.4	96.6	39	SC	10.7
40	AR	17,300	0.4	97.0	40	NC	10.6
41	MS	16,670	0.4	97.4	41	LA	10.5
42	NV	15,120	0.4	97.8	42	IN	10.5
43	DE	12,770	0.3	98.1	43	GA	10.4
44	WV	12,280	0.3	98.4	44	ND	9.8
45	VT	11,990	0.3	98.7	45	TN	8.9
46	AK	11,450	0.3	99.0	46	SD	8.6
47	ID	10,910	0.3	99.2	47	KY	8.2
48	MT	10,540	0.3	99.5	48	AL	8.1
49	ND	6,640	0.2	99.6	49	AR	7.4
50	WY	6,360	0.2	99.8	50	MS	6.5
51	SD	6,000	0.1	99.9	51	WV	6.3
NONE OR NOT STATED ¹		2,270	0.1	100.0	NONE OR NOT STATED ¹		---
U.S.		4,121,534	100.0		U.S.		17.6

¹Includes domestically issued passports to U.S. citizens and nationals residing outside the United States.

SOURCES: U.S. Dept. of State. Summary of Passport Statistics, January 1984. Table 1.

U.S. Bureau of the Census. 1985. "State Population Estimates, by Age and Components of Change: 1980 to 1984." Current Population Reports: Population Estimates and Projections, Series P-25, No. 970.

Michigan ranked tenth among the various states in terms of the number of its residents that received passports in 1983. Residents of the more heavily populated states of Illinois and Ohio were issued more passports, and residents of the less populated states of Wisconsin, Minnesota, and Indiana received fewer passports.

Whereas Michigan ranked tenth in number of passports issued to its residents in 1983, it ranked only 28th in number of passports issued to its residents on a per capita basis. On this basis Michigan residents received somewhat fewer passports than residents of Minnesota, Wisconsin, or Illinois, which suggests that Michiganians may have a somewhat lower propensity for overseas travel vis-a-vis residents of these neighboring states. In fact, Michiganians can generally be considered below average in their propensity for overseas travel, since the U.S. as a whole had 17.6 passport recipients per thousand residents in 1983, and Michigan had only 13.6 recipients per thousand.

Between 1971 and 1982 the number of passports issued to Michiganians increased 53%. This growth was higher than that observed for Illinois, Indiana, or Ohio, but lower than that observed for Minnesota or Wisconsin (Table 5-8). Between 1980 and 1982 an upswing in the number of passports issued to residents of Michigan and most surrounding states occurred. This is in sharp contrast to most of the other indicators of travel activity presented in this book, which generally show decreases in various types of travel activity during these recessionary years. This perhaps suggests that those who could afford to travel abroad were economically insulated from the effects of the recession. Changes instituted in 1983 in the regulations governing passport issuance which make it difficult to determine if the upswing in passport issuance observed for 1980-82 continued in 1983.

Over three-quarters of the Michiganians receiving passports in 1983 or in any of the preceding 11 years stated on their passport application that they intended to visit Europe. Comparatively fewer of the Michigan residents who received passports between 1972 and 1983 stated that they intended to visit countries in the Far East, the Americas, the Middle East, Australia, Oceania, or Africa (Table 5-9).

References

- "Can We Bring Them Here From Over There?" 1981. The Detroit. 3(1):42-45.
- Grossinger, Bunny; Helmut Knipp; Ron Friedman; Sandra Jaco; Brian Thom; James Groome; and Albert E. Kudrle. 1981. The World Is Your Market: An International Marketing Manual for Hotels and Motels. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Grossinger, Bunny; Helmut Knipp; Ron Friedman; Sandra Jaco; James Groome; and Albert E. Kudrle. 1981. The Care and Feeding of Guests From Abroad: A Service Manual for Hotels and Motels. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Killough, T. Patrick. 1982. "Michigan International Tourism: The Promise of 1982." In Fridgen, J.D. and D.J. Allen (eds.). Michigan Tourism: How Can Research Help? Symposium Proceedings, Special Report #6, Agricultural Experiment Station, Michigan State University, East Lansing.
- Milstein, Samuel A. 1981. "Michigan's 1981 World: A Review and Inventory of Michigan's International Affairs." Report to the Michigan Office of the Governor.

Table 5-8. Number of passports issued to residents of Michigan and surrounding states, 1971-1983.

YEAR	NO. OF TRAVELERS PER PASSPORT (U.S. Average)	NUMBER OF PASSPORTS ISSUED TO RESIDENTS OF ...					
		Michigan	Illinois	Indiana	Minnesota	Ohio	Wisconsin
1971	1.11	78,150	137,640	34,050	38,880	86,370	37,740
1972	1.10	97,250	149,810	44,670	47,880	103,820	44,230
1973	1.09	108,770	149,830	41,180	49,610	101,040	43,830
1974	1.08	85,680	130,880	37,100	43,160	89,530	39,800
1975	1.07	81,550	126,360	32,780	40,840	84,230	36,700
1976	1.06	94,120	154,890	38,110	48,240	106,020	41,630
1977	1.04	99,110	166,220	45,490	64,300	108,030	50,640
1978	1.03	86,040	159,670	45,340	64,320	106,570	54,530
1979	1.03	98,990	144,730	43,720	63,440	109,300	50,560
1980	N.A.	89,590	147,520	43,290	64,470	100,440	49,660
1981	N.A.	98,730	148,490	45,770	68,350	102,480	53,540
1982	N.A.	119,780	173,580	50,020	68,640	98,220	73,820
1983	N.A.	123,250	172,070	57,250	74,250	138,470	74,990
Percent change, 1971-1982		53.3	26.1	49.6	76.5	13.7	95.6

NOTE: Data are based on a random sample of all passports issued during a given year. Passports are not required for certain countries under certain circumstances. Prior to 1983, all passports were valid for 5 years and could cover travel of more than one person. Beginning in 1983, passports no longer could cover travel of more than one person, were valid for 5 years in the case of minors, and were valid for 10 years in the case of adults.

SOURCE: U.S. Dept. of State, Passport Office. Summary of Passport Statistics, quarterly.

Table 5-9. First area destination of passport recipients residing in Michigan, 1972-1983.

Number and percentage of Michiganian passport recipients that intended to visit a country in...							TOTAL
YEAR	EUROPE	FAR EAST	NORTH, CENTRAL, OR SOUTH AMERICA	MIDDLE EAST	AUSTRALIA OR OCEANIA	AFRICA	
1972	87,930 (90.4%)	2,250 (2.3%)	2,440 (2.5%)	2,440 (2.5%)	1,500 (1.5%)	690 (0.7%)	97,250 (100%)
1973	93,480 (85.9%)	3,300 (3.0%)	5,290 (4.9%)	4,130 (3.8%)	1,600 (1.5%)	940 (0.9%)	108,770 (100%)
1974	65,980 (77.0%)	3,730 (4.3%)	7,190 (8.4%)	4,680 (5.5%)	2,820 (3.3%)	1,240 (1.4%)	85,680 (100%)
1975	62,090 (76.1%)	3,650 (4.5%)	8,440 (10.3%)	4,010 (4.9%)	2,370 (2.9%)	990 (1.2%)	81,550 (100%)
1976	71,540 (76.0%)	4,110 (4.4%)	10,390 (11.0%)	4,800 (5.1%)	2,050 (2.2%)	1,220 (1.3%)	94,120 (100%)
1977	78,480 (79.2%)	4,010 (4.0%)	8,560 (8.6%)	4,740 (4.8%)	2,380 (2.4%)	940 (0.9%)	99,110 (100%)
1978	68,970 (80.2%)	3,810 (4.4%)	5,860 (6.8%)	4,010 (4.7%)	2,430 (2.8%)	920 (1.1%)	86,040 (100%)
1979	78,490 (79.3%)	4,480 (4.5%)	8,230 (8.3%)	4,380 (4.4%)	2,530 (2.5%)	880 (0.9%)	98,990 (100%)
1980	70,250 (78.4%)	4,100 (4.6%)	7,630 (8.5%)	4,220 (4.7%)	2,230 (2.5%)	1,140 (1.3%)	89,590 (100%)
1981	84,130 (85.2%)	3,720 (3.8%)	5,180 (5.2%)	3,060 (3.1%)	1,880 (1.9%)	740 (0.7%)	98,730 (100%)
1982	96,060 (80.2%)	6,710 (5.6%)	8,290 (6.9%)	4,650 (3.9%)	2,720 (2.3%)	1,270 (1.1%)	119,780 (100%)
1983	96,970 (78.7%)	6,150 (5.0%)	9,110 (7.4%)	6,650 (5.4%)	2,780 (2.3%)	1,590 (1.3%)	123,250 (100%)

NOTE: "First area destination" means the first country a passport recipient listed on the portion of the passport application requesting a list of countries to be visited. A "first area destination" is not necessarily the country a passport recipient intended to visit first or visit for the longest period of time. Data are based on a random sample of all passports issued during a given year. Passports are not required for certain countries under certain circumstances. Prior to 1983, all passports were valid for five years and could cover travel of more than one person. Beginning in 1983, passports no longer could cover travel of more than one person, were valid for 5 years in the case of minors, and were valid for 10 years in the case of adults.

SOURCE: U.S. Dept. of State, Passport Office. Summary of Passport Statistics, quarterly.

CHAPTER 6

ESTIMATES OF THE ECONOMIC IMPACT OF TRAVEL IN MICHIGAN

Daniel M. Spotts

Introduction

Economic decision-making at the state level requires a knowledge of the size of the principal industries of a state's economy. At present, the only available estimates of the size of the travel and tourism industry in Michigan are those published by the U.S. Travel Data Center in Washington D.C. These estimates are produced by the Data Center's Travel Economic Impact Model (TEIM). This chapter utilizes results from the TEIM to compare the impact of travel on Michigan's economy with the impact of travel on other state's economies, and to document changes over time in the impact of travel on Michigan's economy.

The chapter deals solely with statewide estimates of the combined economic impact of all types of travel. Authoritative estimates of the economic impact of specific recreation activities in Michigan are not available except in the case of boating (Stynes, et al., 1983) and horse racing (Dike, et al., 1977). Estimates of economic impact at the county or regional level are not available. However, some studies of the economic impact of certain types of travel activities on local areas have been conducted and are cited at the end of the chapter. The Michigan Travel Bureau has distributed some rough approximations of county-level travel expenditures in the past, but these were not intended for publication. At present county-level estimates of economic impact can only be obtained from the U.S. Travel Data Center on a contract basis.

An Overview of the Travel Economic Impact Model

Since all of the estimates discussed below were produced by the TEIM, it is important to understand something of the nature and limitations of this model. The TEIM was developed by the U.S. Travel Data Center to provide annual estimates of the impact of travel by U.S. residents on national, state, and county economies. This travel includes trips taken for such purposes as business, recreation, and visiting friends and relatives. The TEIM is a disaggregated model built upon estimates of traveler expenditures in 16 different categories, and the business receipts, employment, personal income, and tax receipts that result. The benchmark model estimates are primarily based on data from the 1977 National Travel Survey (U.S. Bureau of the Census, 1979). However, the model has been updated to provide estimates for succeeding years.

The TEIM cannot estimate all spending associated with travel in the U.S. due to limitations in the data used in the model and a lack of data needed to refine the model. Specifically, the estimates of travel expenditures produced by the model do not include:

1. Goods and services purchased in anticipation of a trip away from home (e.g., sports equipment, travel guides, skiing lessons).
2. Major consumer durables related to outdoor recreation on trips, (e.g., boats, off-road vehicles, snowmobiles), with the exception of recreation vehicles.
3. Expenditures on gaming in states in which such activities are legal.

4. Expenditures in states that travelers pass through in a single day. The TEIM records travel expenditures only for those states where travelers spent the night, originated, or were destined.
5. Expenditures by U.S. residents in the U.S. pursuant to traveling to a foreign destination.
6. Expenditures on day trips to places less than 100 miles from home. The TEIM records travel expenditures only for day trips to places 100 miles or more away from home and all overnight trips regardless of distance. However, spending on day trips close to home may represent a larger proportion of total travel spending than is commonly assumed. One indication of this is the fact that in 1982 51% of the expenditures of Ontario residents on intra-provincial trips over 24 miles from home took place on trips to places less than 100 miles from home (Ontario Ministry of Tourism and Recreation, 1983:29).
7. Expenditures by foreign travelers in the U.S. for years prior to 1983. Estimates of both domestic and foreign travel expenditures were produced for 1983.

Finally, the TEIM estimates only the direct economic impact of traveler expenditures. The model estimates do not include the indirect spending resulting from travel-related businesses and their employees spending a portion of the money they receive from travelers at other businesses who, along with their employees, spend some of these receipts at yet other businesses, etc.

In spite of limitations of the TEIM estimates, they are the best available indicators of the economic impact of travel in the U.S., and can be used to compare the sizes of travel industries in different states and to identify fluctuations in the economic impact of travel over time.

A National Perspective

Table 6-1 displays TEIM estimates of travel expenditures by state for 1983. These figures, the latest available, include both domestic and foreign travel expenditures. They indicate that travelers spend \$5.5 billion in Michigan in 1983. This amount is somewhat lower than the amount spent in Illinois or Ohio, but considerably higher than travel expenditures in Minnesota, Wisconsin, or Indiana.

Much of the travel spending in a given state is by residents of that state. This partially accounts for the more heavily populated states having larger values for total travel expenditures. Consequently it is useful to examine state travel expenditures on a per capita basis. When 1983 travel expenditures in a given state are divided by that state's 1983 population, and the resulting values for all states placed in rank order, Michigan ranks 42nd in the nation. Minnesota and Wisconsin rank 15th and 30th respectively. The higher rankings of these states may be due to a greater proportion of travel

Table 6-1. Estimates of each state's economic dependence on travel, 1983.

1983 DIRECT TRAVEL EXPENDITURES			1983 DIRECT TRAVEL EXPENDITURES PER CAPITA ¹			1983 TRAVEL IMPACT FACTOR ²		
Rank	State	(billions)	Rank	State		Rank	State	
1	CA	\$28.574	1	NV	\$6,972.13	1	NV	56.47
2	FL	19.268	2	HI	3,512.77	2	HI	28.45
3	NY	15.167	3	DC	2,168.54	3	VT	19.44
4	TX	14.644	4	VT	1,942.86	4	FL	15.39
5	NJ	8.569	5	FL	1,793.71	5	DC	13.94
6	PA	7.545	6	AK	1,733.89	6	ME	13.44
7	NV	6.254	7	ME	1,330.13	7	NM	11.50
8	IL	5.921	8	CO	1,323.27	8	AZ	10.89
9	OH	5.884	9	WY	1,213.18	9	WY	10.42
10	MI	5.545	10	NH	1,204.59	10	CO	10.36
11	MA	4.995	11	AZ	1,170.37	11	NH	10.01
12	GA	4.903	12	NJ	1,148.04	12	AK	9.98
13	MW	4.584	13	CA	1,134.52	12	UT	9.98
14	NC	4.486	14	NM	1,107.22	13	ID	9.73
15	MO	4.399	15	MW	1,106.18	14	MN	9.34
16	CO	4.163	16	ND	1,001.47	15	SC	8.80
17	VA	3.732	17	TX	928.07	16	ND	8.59
18	WI	3.640	18	ID	918.95	17	CA	8.54
19	HI	3.576	19	UT	899.88	18	GA	8.21
20	MD	3.504	20	MO	886.36	18	MT	8.21
21	AZ	3.476	21	MA	866.74	19	NJ	8.17
22	LA	3.309	22	NY	858.69	20	AR	8.11
23	TN	2.997	23	GA	855.37	21	MO	8.05
24	WA	2.909	24	OR	845.37	22	TX	8.01
25	SC	2.644	25	MT	825.77	23	OR	7.87
26	OK	2.607	26	MD	815.07	24	NC	7.50
27	IN	2.409	27	SC	812.04	25	LA	7.29
28	OR	2.247	28	DE	795.38	26	OK	7.24
30	KY	2.140	30	WI	766.96	28	WI	6.78
31	AR	1.667	31	LA	745.27	29	TN	6.74
32	IA	1.609	32	NC	738.31	30	NY	6.56
33	KS	1.576	33	AR	716.99	31	MA	6.51
34	NM	1.549	34	CT	703.41	32	WV	6.48
35	ME	1.523	35	SD	683.83	33	DE	6.28
36	UT	1.456	36	WA	676.20	34	KY	6.18
37	AL	1.399	37	NE	675.44	35	MD	6.14
38	DC	1.351	38	VA	671.71	36	NE	6.10
39	WV	1.159	39	KS	649.63	37	WA	5.58
40	NH	1.154	40	TN	640.93	38	PA	5.55
41	MS	1.109	41	PA	634.62	39	VA	5.51
42	NE	1.078	42	MI	612.71	40	KS	5.41
43	VT	1.020	43	WV	590.72	41	MI	5.33
44	ID	0.907	44	KY	576.35	41	MS	5.33
45	AK	0.834	45	IA	554.06	42	IA	5.24
46	ND	0.682	46	OH	548.06	43	OH	4.87
47	MT	0.673	47	IL	516.04	44	CT	4.71
48	WY	0.626	48	IN	440.24	45	IN	4.18
49	DE	0.482	49	MS	429.68	46	IL	4.16
50	SD	0.478	50	RI	372.38	47	AL	3.84
51	RI	0.356	51	AL	353.19	48	RI	3.19
	US	208.984		US	893.01		US	7.64

¹Equals 1983 direct travel expenditures in state /1983 population of state.²Equals (1983 direct travel expenditures in state/1983 total personal income of state)x 100.SOURCES: U.S. Travel Data Center, 1985. Impact of Travel on State Economies, 1983. Washington D.C.: U.S. Travel Data Center. Reprinted with permission.U.S. Bureau of the Census. 1985. "State Population Estimates, by Age and Components of Change: 1980 to 1984." Current Population Reports, Population Estimates and Projections, Series P-25, No. 970, Table 1.U.S. Dept. of Commerce, Bureau of Economic Analysis. 1985. Survey of Current Business, 65(8):18.

expenditures coming from out-of-state travelers, greater travel spending by the residents of these states, or both.¹

Travel expenditures in each state can also be examined in relation to each state's total personal income.² If travel expenditures in a state are high relative to that state's total personal income, then that state's economy can be considered more dependent on travel than other states and vice versa. When ratios of travel expenditures to personal income are calculated for each state and then placed in rank order, the results are similar to those of the previously discussed analysis. This is due to the high correlation between state population and state personal income. In general, states with relatively low population bases, and economies in which travel is a dominant or major industry, receive higher rankings than other states, which suggests that they are more dependent on travel than other states. Other states with larger populations and larger economies tend to have lower rankings because such states generally have more diversified economies that are less dependent on any one industry, including travel.³

Michigan's low rank of 41 indicates that its economy is not as dependent on tourism as other state's economies. In contrast to states such as Nevada and Vermont which have relatively small populations and economies dominated by the travel industry, Michigan has a large population and several major industries, including agriculture, manufacturing, and forestry in addition to travel. This is in fact consistent with common conceptions of the nature of states' economies; most people would probably be more likely to consider Hawaii or Florida a "tourist state" than Michigan. These findings, however, do not mean that Michigan does not have a large travel industry, that its travel industry is not one of the most important industries in the state, that Michigan does not need to further diversify its economy, or that Michigan's economy would not suffer if its travel industry declined. Rather, they simply suggest that if gasoline rationing or some other catastrophe were to strike the nation's travel industry, Michigan's economy would be damaged rather than devastated.

The figures presented in Tables 6-2 and 6-3 tell much the same story as those in Table 6-1. Travel expenditures in Michigan in 1983 directly generated an estimated 123,600 full and part-time jobs in Michigan, which yielded an estimated \$1.15 billion in

¹If Michigan's lower ranking in per capita travel expenditures vis-a-vis Wisconsin and Minnesota is in fact due to relatively less spending by out-of-state travelers, this would not necessarily mean that their travel product or their promotional programs are superior to Michigan's. This is because a state's appeal as a travel destination should not be judged solely on its ability to attract nonresident travelers. An ancillary criterion should be the state's ability to encourage its residents to travel within their own state rather than to other states. A state's economy benefits from retarding an outflow of dollars as well as from attracting an inflow of dollars, and this is why Michigan promotes to in-state as well as out-of-state markets.

²This procedure was introduced by Royer, McCool, and Hunt (1974) and further discussed by Doering (1976).

³Doering (1976), using 1972 data, found that ratios of state travel expenditures to gross state product yielded results that were very similar to ratios of state travel expenditures to state personal income. The Spearman rank order correlation between the two ratios across all 50 states was +.96.

Table 6-2. Travel-related employment in state economies, 1983.

1983 Travel-generated Direct Employment ¹ (000)			1983 Travel-generated Direct Employment as a % of Total Non- agricultural employment			1983 Travel- generated payroll (millions)		
Rank	State		Rank	State		Rank	State	
1	CA	579.5	1	NV	33.76	1	CA	\$ 6,737.9
2	FL	441.5	2	HI	21.15	2	FL	4,252.3
3	NY	293.7	3	VT	16.33	3	NY	3,612.6
4	TX	293.4	4	FL	11.30	4	TX	3,214.3
5	NJ	191.0	5	ME	10.64	5	NJ	2,303.5
6	PA	183.5	6	ID	9.81	6	NV	1,764.0
7	NV	136.0	7	NM	8.91	7	PA	1,742.8
8	OH	133.2	8	WY	8.44	8	IL	1,416.3
9	IL	129.5	9	CO	7.68	9	OH	1,231.6
10	MI	123.6	10	AZ	7.65	10	MA	1,177.8
11	MN	116.0	11	NH	7.55	11	MI	1,150.2
12	NC	112.4	12	MT	7.50	12	MN	1,020.2
13	WI	106.0	13	UT	7.46	13	CO	991.5
14	GA	102.4	14	ND	7.30	14	GA	989.3
15	CO	101.9	15	MN	6.75	15	HI	974.3
16	MA	101.4	16	AR	6.31	16	MO	956.7
17	MO	95.5	17	AK	6.16	17	NC	920.0
18	VA	87.4	18	DE	6.13	18	MD	872.2
19	HI	85.9	19	SD	6.12	19	VA	801.2
20	AZ	82.5	20	NJ	6.04	20	WI	762.6
21	MD	80.0	21	SC	6.02	21	AZ	744.8
22	TN	72.2	22	OR	5.89	22	LA	675.3
23	SC	71.5	23	CA	5.81	23	WA	666.2
24	LA	71.1	24	WI	5.68	24	TN	606.8
25	IN	66.9	25	NE	5.42	25	OK	580.1
26	WA	65.6	25	OK	5.42	26	SC	531.9
27	OK	63.4	26	DC	5.31	27	IN	526.6
28	OR	56.9	27	WV	4.98	28	CT	463.5
29	IA	46.9	28	MO	4.93	29	OR	445.1
30	AR	46.8	29	TX	4.74	30	DC	437.2
31	KY	45.9	30	NC	4.65	31	KY	382.9
32	ME	45.2	31	MD	4.64	32	UT	340.4
33	NM	42.7	32	LA	4.54	33	NM	333.2
34	UT	42.3	33	IA	4.51	34	ME	326.4
35	KS	41.1	34	GA	4.49	35	KS	321.3
36	CT	38.9	35	KS	4.46	36	AR	318.6
37	AL	35.9	36	TN	4.19	37	IA	318.4
38	VT	33.7	37	WA	4.14	38	AL	283.3
39	NE	33.1	38	PA	4.06	39	VT	230.4
40	DC	31.7	39	NY	4.02	40	NH	228.3
41	ID	31.2	40	KY	3.98	41	NE	220.8
42	NH	30.9	41	VA	3.96	42	WV	220.3
43	MS	29.3	42	MI	3.83	43	AK	219.1
44	WV	29.0	43	MA	3.77	44	MS	213.6
45	MT	20.7	44	MS	3.70	45	ID	200.6
46	ND	18.3	45	IN	3.30	46	MT	137.6
47	WY	17.1	46	OH	3.26	47	ND	126.4
48	DE	16.3	47	IL	2.86	48	DE	126.3
49	SD	14.4	48	AL	2.70	49	WY	124.9
50	AK	13.2	49	CT	2.69	50	SD	92.7
51	RI	9.2	50	RI	2.32	51	RI	85.8
	US	4,757.7		US	5.25		US	\$47,420.1

¹Includes both full-time and part-time jobs.SOURCES: U.S. Travel Data Center, 1985. Impact of Travel on State Economies, 1983. Washington, D.C.: U.S. Travel Data Center. Reprinted with permission.U.S. Dept. of Labor, Bureau of Labor Statistics, 1985. Employment and Earnings. 32 (5):118-135.

Table 6-3. State tax revenues generated by domestic travel in the U.S., 1983.

Rank	State	State Tax Revenues Generated by Domestic Travel in 1983 ^a (\$ millions)	Rank	State	State Tax Revenues Generated by Domestic Travel in 1983 As A Percent of Total State Government Tax Collections in 1983
1	CA	947	1	NV	19.38
2	FL	646	2	VT	11.17
3	NY	576	3	FL	10.38
4	NJ	349	4	HI	8.26
5	TX	325	5	CO	7.59
6	PA	316	6	ME	7.18
7	MN	245	7	ID	6.94
8	IL	240	8	AZ	6.72
9	OH	228	9	UT	6.26
10	MI	218	10	NJ	5.70
11	GA	191	11	SC	5.68
12	MA	189	12	MN	5.67
13	WI	181	13	SD	5.55
14	NV	151	14	GA	5.45
15	NC	141	15	AR	5.38
16	AZ	139	16	ND	5.32
17	MO	135	17	NH	5.16
18	CO	133	18	MO	5.11
19	VA	132	19	TN	4.90
20	WA	130	20	NE	4.86
21	MD	128	21	NM	4.80
22	SC	121	22	CT	4.69
23	KY	120	23	KY	4.61
24	CT	119	24	DC	4.59
25	TN	110	25	MS	4.36
26	LA	101	26	WV	4.28
26	IN	101	27	CA	4.25
27	HI	95	28	WI	4.21
28	AR	72	29	KS	3.96
28	IA	72	30	PA	3.75
29	MS	67	31	VA	3.71
30	WV	63	32	MD	3.69
31	KS	62	33	MA	3.67
32	DC	61	34	TX	3.63
32	UT	61	35	IA	3.57
33	OK	57	36	NY	3.55
34	NM	56	37	NC	3.50
34	ME	56	38	OH	3.39
35	AL	55	39	LA	3.33
36	NE	48	40	IL	3.23
37	ID	43	41	IN	3.16
38	VT	40	42	WA	3.10
39	OR	37	42	MI	3.10
40	ND	28	43	MT	2.73
41	SD	18	44	RI	2.48
41	RI	18	45	WY	2.45
41	WY	18	46	AL	2.35
42	NH	17	47	DE	2.19
43	DE	14	48	OK	2.17
43	MT	14	49	OR	2.07
44	AK	13	50	AK	0.64
	U.S.	7,497		U.S.	4.34

^aFigures exclude state tax revenues generated by expenditures of foreign visitors in 1983.

SOURCES: U.S. Travel Data Center. 1985. Impact of Travel on State Economies 1983. Washington, D.C.: U.S. Travel Data Center. Reprinted with permission.

U.S. Bureau of the Census. 1985. State Government Tax Collections in 1984. Series GF84, No. 1. Washington, D.C.: U.S. Government Printing Office, Table 2.

payroll income. But while Michigan ranks tenth in number of jobs generated and eleventh in payroll income generated, it ranks 42nd in number of jobs as a percentage of total nonagricultural employment (Table 6-2). Similarly, Michigan ranks 10th in state tax revenues directly generated by travel expenditures in Michigan, but 42nd in state tax revenues generated as a percentage of total state tax collections (Table 6-3). According to TEIM estimates, less than 4% of the nonagricultural jobs in Michigan and only 3% of the state tax revenues collected in Michigan are directly generated by travel expenditures in Michigan.

Statewide Estimates Over Time

Table 6-4 presents estimates of the direct economic impact of domestic travel on various sectors of Michigan's economy from 1977 through 1983. The estimates of travel expenditures, business receipts, payroll income, and tax revenues are difficult to compare across years because they are expressed in current rather than constant dollars and therefore do not eliminate the influence of inflation. In spite of this limitation, a definite drop in the level of each of these indicators is evident for 1982, the worst year of the recent recession. This appears to have been the economic effect of the reduced travel activity at that time, documented in Chapter 4. A clearer picture of trends in the size of Michigan's travel industry can be obtained from employment figures, which show a steady decline from 1979 through 1982 in the number of jobs directly generated by travel expenditures in Michigan. Much of this decline may again have been due to the recession.

References

- Dike, George K.; Roger Haskin; and Larry Harrington. 1977. Horse Racing: Its Contribution to Michigan's Economy. Extension Bulletin E-1063. Cooperative Extension Service, Michigan State University. East Lansing.
- Doering, Thomas R. 1976. "A Reexamination of the Relative Importance of Tourism to State Economies." Journal of Travel Research. 15(1):13-17.
- Gartner, William C. and Donald F. Holecek. 1982. "The Economic Impact of a Short-term Tourism Industry Exposition (1980 Greater Michigan Boat and Fishing Show)." Michigan State University Agricultural Experiment Station Research Report 436. East Lansing.
- Jordan, Scott W. and Daniel R. Talhelm. 1982. The Economic Impacts of Sport Fishing in Alcona County. Michigan Sea Grant Publication MICHU-SG-82-204. Ann Arbor, MI: Michigan Sea Grant Publications.
- Kapetsky, J.M. and J.R. Tyckman. 1973. "Economic Implications from the Grand Traverse Bay Sport Fishery (1969-1972)." Michigan Department of Natural Resources, Fisheries Division Management Report No. 5.
- Ontario Ministry of Tourism and Recreation. 1983. Volume I - 1982 Ontario Travel Survey Summary-Report. Toronto: Ontario Ministry of Tourism and Recreation.
- Quandt, Elder. 1985. "Tourism and the West Michigan Economy." Business Outlook: The Quarterly Report for West Michigan. 1(3):1-6.

- Raphael, C. Nicholas and Eugene Jaworski. 1979. "Economic Value of Fish, Wildlife, and Recreation in Michigan's Coastal Wetlands." Coastal Zone Management Journal. 5(3):181-193.
- Reynolds, Paul M.; Donald F. Holecek; and Daniel J. Stynes. 1981. "The Economic Impact of Children's Camps in Michigan." Report on a cooperative project of the Department of Park and Recreation Resources at Michigan State University and the Michigan Section of the American Camping Association.
- Royer, Lawrence E.; Stephen F. McCool; and John D. Hunt. 1974. "The Relative Importance of Tourism to State Economies." Journal of Travel Research. 12(4):13-16.
- Smith, Tina Beyer and Marian J. Kyzyzowski. 1981. Nonprofit Arts Organizations in Michigan: A Profile and Economic Impact Analysis. Report prepared for the Michigan Council for the Arts. Ann Arbor, MI: University of Michigan Survey Research Center.
- Stynes, Daniel J.; Gene L. Brothers; Donald F. Holecek; and Dave Verbyla. 1983. Spending Patterns and Economic Impacts of Michigan Registered Boat Owners. Michigan Sea Grant Publication MICHU-SG-83-210. Ann Arbor, MI: Michigan Sea Grant Publications.
- Touche, Ross. 1985. "Michigan: State of the Arts, An Economic Impact Study, Summary of Findings." Detroit: Touche Ross.
- U.S. Bureau of the Census. 1979. 1977 Census of Transportation, National Travel Survey. Washington, D.C.: U.S. Government Printing Office.
- Verway, David I. 1974. "The Value of Travel." Michigan State Economic Record. 16(2):5f.

Table 6-4. Estimates of the direct economic impact of domestic travel on various sectors of Michigan's economy, 1977-1983.

CATEGORY	1977	1978	1979	1980	1981	1982	1983
U.S. DOMESTIC TRAVEL EXPENDITURES FOR ALL TRIPS (\$millions)							
Public transportation	657	739	873	995	1,028	1,001	1,063
Automobile transportation	759	809	929	1,283	1,302	1,232	1,222
Lodging	691	783	850	867	899	920	993
Food Service	1,097	1,195	1,249	1,223	1,233	1,200	1,284
Entertainment and recreation	426	449	452	433	430	423	459
Incidental purchases	372	388	385	373	368	353	371
Total	4,003	4,362	4,738	5,174	5,259	5,127	5,391
U.S. TRAVEL-GENERATED BUSINESS RECEIPTS (\$millions)¹							
Public transportation	N.A.	N.A.	818	937	987	960	1,019
Automobile transportation	N.A.	N.A.	834	1,161	1,178	1,184	1,207
Lodging	N.A.	N.A.	839	855	886	907	979
Food Service	N.A.	N.A.	1,201	1,176	1,186	1,154	1,235
Entertainment and recreation	N.A.	N.A.	452	433	430	423	459
General retail trade	N.A.	N.A.	370	359	354	339	357
Total	N.A.	N.A.	4,514	4,921	5,020	4,967	5,255
U.S. TRAVEL-GENERATED PAYROLL (\$millions)							
Public transportation	196	219	257	272	277	277	297
Automobile transportation	56	61	64	79	77	77	79
Lodging	138	153	166	175	180	191	199
Food Service	269	297	311	314	318	297	314
Entertainment and recreation	107	125	125	123	119	120	131
General retail trade	52	55	55	54	52	51	53
Travel arrangement	21	25	28	29	32	36	42
Total	838	936	1,007	1,045	1,054	1,049	1,114
U.S. TRAVEL-GENERATED EMPLOYMENT (thousands of full and part-time jobs)							
Public transportation	14.0	14.5	15.9	14.8	13.4	12.6	12.4
Automobile transportation	6.8	7.1	6.8	7.9	7.4	7.0	6.9
Lodging	22.2	22.4	22.8	21.7	21.0	21.3	21.9
Food Service	66.2	68.3	66.5	63.0	59.8	53.7	55.1
Entertainment and recreation	16.8	18.1	17.1	15.8	14.3	14.1	14.4
General retail trade	7.3	7.0	6.5	5.8	5.6	5.3	5.4
Travel arrangement	2.2	2.5	2.7	2.7	2.7	2.8	3.2
Total	135.5	139.9	138.3	131.7	124.2	116.9	119.3
U.S. TRAVEL-GENERATED TAX REVENUES (\$millions)							
Federal tax revenues	211	287	339	339	342	331	354
State tax revenues	151	163	175	211	212	198	218
Local tax revenues	39	40	42	45	47	52	57
Total	401	490	556	595	601	581	629

¹Travel-generated business receipts differ from travel expenditures by excluding federal, state and local retail sales, occupancy, admission, and other taxes collected by establishments directly from customers and paid directly to taxing authorities. These estimates are useful for comparing with business sales and receipts data published by the U.S. Department of Commerce.

NOTE: These figures do not account for indirect economic impacts of travel expenditures, or the direct and indirect economic impacts of foreign travel expenditures in Michigan. Details may not add to totals due to rounding.

SOURCE: U.S. Travel Data Center. Impact of Travel on State Economies, annual. Washington, D.C.: U.S. Travel Data Center. Reprinted with permission.

CHAPTER 7

COMMERCIAL LODGING IN MICHIGAN

Timothy E. Reardon and Daniel M. Spotts

Introduction

Michigan's geographic and economic diversity has given rise to an exceptionally broad range of lodging opportunities. Accommodations in Michigan range from plush hotels serving business travelers in metropolitan areas to rustic cabins serving summer vacationers in the state's north country. The entire spectrum of lodging opportunities in Michigan is aggressively marketed by organizations seeking to establish a strong position in an increasingly competitive marketplace. New standards in design, service, and amenities have followed in the wake of this heightened competition.

A Decade of Change

Michigan's commercial lodging industry has undergone dramatic changes, in both size and composition, in the last decade. In 1975 there were 28 hotel/motel systems operating in Michigan which managed a total of 175 properties and 24,402 rooms (Table 7-1). By 1985, the number of systems had increased 46%, and the number of affiliated properties and rooms had increased 52% and 34%, respectively (Table 7-2). An increase in the number of affiliated rooms in the state, however, is not synonymous with an increase in the actual supply of rooms. For example, in 1977 Timoa Inns, Inc. and Budget Motels & Hotels of America, Inc. jointly added 34 Michigan properties and 3,519 rooms in the form of referral affiliations with existing properties. Conversely, Red Roof Inns, Inc. has an equity interest in and manages all of their rooms, including the 872 units constructed from 1975 through 1985.

The formation of new management companies and the emergence of national and regional budget lodging chains in the Michigan market between 1980 and 1985 account for most of the increases in both the number of systems and affiliated rooms during the 1975-1985 period. In 1983, the 29,222 affiliated rooms in Michigan represented approximately 46% of the statewide lodging supply as estimated by the Michigan Travel Bureau (1983). While the average number of properties per system varied only slightly during the decade, the average number of rooms per system and rooms per property declined 8.8% and 12.1%, respectively (Table 7-3). These changes are probably due to such factors as an increase in the number of systems, smaller properties joining referral systems, and the dramatic growth of new budget properties comprised of 60-110 rooms.

In 1975 the five hotel/motel systems with the largest number of rooms in Michigan accounted for more than 62% of the total number of affiliated rooms in the state (Table 7-1). A decade later the state's affiliated room supply was less concentrated in only a few systems as a result of growth in the number of systems doing business in the state. In 1985 the top five systems accounted for only 50% of the affiliated rooms in Michigan (Table 7-2). In both years Holiday Inns, Inc. had the largest proportion of affiliated rooms in the state, although its share of these rooms dropped from 31% in 1975 to 22% in 1985. Between 1975 and 1985 Best Western experienced an 81% increase in membership rooms in Michigan, which propelled it from fifth place in number of affiliated rooms in 1975 to second place in 1985. The number of rooms in two Ohio-based budget organizations, Red Roof Inns and Knights Inn, also grew during this period to the point where they were among the top five systems in 1985 in terms of number of affiliated

Table 7-1. Inventory of hotel and motel systems operating at least one property in Michigan, 1975¹

Rank	HOTEL/MOTEL SYSTEM	PROPERTIES IN MICHIGAN		ROOMS IN MICHIGAN		
		Number	Percent	Number	Percent	Cumulative Percent
1	Holiday Inns, Inc.	52	29.7	7,658	31.4	31.4
2	Sheraton Hotels & Motor Inns	7	4.0	2,182	8.9	40.3
3	Howard Johnson's Accommodations Group	15	8.6	1,911	7.8	48.1
4	Ramada Inns, Inc.	13	7.4	1,804	7.4	55.5
5	Best Western, Inc.	32	18.3	1,759	7.2	62.7
6	Hilton Hotels Corporation	5	2.9	1,653	6.8	69.5
7	United Hotels Company	2	1.1	1,100	4.5	74.0
8	Hospitality Management Services, Inc.	1	0.6	900	3.7	77.7
9	Hyatt Hotels	1	0.6	800	3.3	81.0
10	Red Roof Inns, Inc.	7	4.0	671	2.7	83.7
11	Milner Hotels & Inns	5	2.9	507	2.1	85.8
12	Travelodge International, Inc.	8	4.6	473	1.9	87.7
13	Western International Hotels	1	0.6	413	1.7	89.4
14	Hospitality Motor Inns, Inc.	2	1.1	320	1.3	90.7
15	Motel 6, Inc.	2	1.1	259	1.1	91.8
16	International Hotels, Inc.	1	0.6	250	1.0	92.8
17	Stouffer Hotels	1	0.6	232	0.9	93.7
18	Host International Hotels	1	0.6	200	0.8	94.5
19	Regal 8 Inns	2	1.1	180	0.7	95.2
20	Marriott Hotels	1	0.6	169	0.7	95.9
21	New World Inns, Inc.	1	0.6	148	0.6	96.5
22	Continental Corporation	1	0.6	144	0.6	97.1
23	Imperial "400" National, Inc.	3	1.7	143	0.6	97.7
24	L-K Enterprises	3	1.7	117	0.5	98.2
25	Quality Inns	1	0.6	111	0.5	98.7
25	Friendship Inns International	5	2.9	111	0.5	99.2
26	Pick Hotels Corporation	1	0.6	110	0.5	99.7
27	Fred Harvey, Inc.	1	0.6	77	0.3	100.0
	Total	175	100.0	24,402	100.0	

¹A "hotel/motel system" is a system operating three or more hotels, motels, or resorts, at least one of which is located in Michigan. This definition includes referral groups and management companies managing one or more properties not listed elsewhere in the source.

NOTE: A property that is part of a chain but owned and/or operated by a managing company is listed in the source under both franchise corporation and the management company. In such cases the property was included in the counts for the franchise corporation only. Thus each affiliated lodging establishment in Michigan was counted only once.

SOURCE: American Hotel and Motel Association. 1975. 1975 Directory Hotel and Motel Systems. New York: American Hotel Association Directory Corporation.

Table 7-2. Inventory of hotel and motel systems operating at least one property in Michigan, 1985¹

Rank	HOTEL/MOTEL SYSTEM	PROPERTIES IN MICHIGAN		ROOMS IN MICHIGAN		
		Number	Percent	Number	Percent	Cumulative Percent
1	Holiday Inns, Inc.	44	16.5	7,228	22.2	22.2
2	Best Western International, Inc.	45	16.9	3,181	9.8	31.9
3	Hilton Hotels Corporation	11	4.1	2,751	8.4	40.4
4	Knights Inn	15	5.6	1,649	5.1	45.4
5	Red Roof Inns, Inc.	15	5.6	1,543	4.7	50.2
6	Ramada Inns, Inc.	11	4.1	1,538	4.7	54.9
7	Westin Hotels	1	0.4	1,400	4.3	59.2
8	Sheraton Hotels, Inns, & Resorts Worldwide	7	2.6	1,292	4.0	63.2
9	Howard Johnson Company	11	4.1	1,166	3.6	66.7
10	Hyatt Hotels Corporation	2	0.8	1,141	3.5	70.2
11	Quality Inns	12	4.5	1,088	3.3	73.6
12	Preferred Hotels Worldwide	2	0.8	1,071	3.3	76.9
13	Servico, Inc.	2	0.8	800	2.5	79.3
14	Marriott Hotels	3	1.1	640	2.0	81.3
15	Travelodge International, Inc.	6	2.3	400	1.2	82.5
16	Super 8 Hotels, Inc.	6	2.3	372	1.1	83.6
17	Hotel 6, Inc.	3	1.1	339	1.0	84.7
18	Days Inns of America, Inc.	3	1.1	338	1.0	85.7
19	Harley Hotels	2	0.8	316	1.0	86.7
20	Clarion Collection	1	0.4	296	0.9	87.6
21	Magic Key Inns of America, Inc.	15	5.6	273	0.8	88.4
22	Friendship Inns International	9	3.4	265	0.8	89.3
23	Budget Host Inns	7	2.6	255	0.8	90.0
24	Winegardner & Hammons, Inc.	1	0.4	247	0.8	90.8
25	Stouffer Hotel Company	1	0.4	245	0.8	91.5
26	Radnor Corporation	2	0.8	236	0.7	92.3
27	Milner Hotels, Inc.	2	0.8	230	0.7	93.0
28	Residence Inn Corporation	3	1.1	228	0.7	93.7
29	Dillon Management Associates, Inc.	2	0.8	223	0.7	94.4
30	Skylight Inns, Inc.	2	0.8	220	0.7	95.0
31	Upton Inns, Inc.	5	1.9	201	0.6	95.6
32	Affordable Inns, Inc.	2	0.8	180	0.6	96.2
33	Radisson Hotel Corporation	1	0.4	180	0.6	96.8
34	Budgetel (Marcus Hotel Corporation)	2	0.8	169	0.5	97.3
35	Drury Inns, Inc.	1	0.4	154	0.5	97.7
36	Hotel Investors	1	0.4	151	0.5	98.2
37	Econo Lodges & Econo-Travel Motor Hotels	2	0.8	131	0.4	98.6
38	La Quinta Motor Inns, Inc.	1	0.4	122	0.4	99.0
39	L-K Motels, Inc.	3	1.1	116	0.4	99.3
40	Exel Inns of America, Inc.	1	0.4	111	0.3	99.7
41	Bargaintel Management Company	1	0.4	104	0.3	100.0
	Total	266	100.0	32,590	100.0	

¹A "hotel/motel system" is a system operating three or more hotels, motels or resorts, at least one of which is located in Michigan. This definition includes referral groups and management companies managing one or more properties not listed elsewhere in the source.

NOTE: A property that is part of a chain but owned and/or operated by a management company is listed in the source under both the chain and the management company. In such cases the property was included in the counts for the franchise corporation only. Thus each affiliated lodging establishment in Michigan was counted only once. For example, Holiday Inn of Alpena, owned by Northern Michigan Inns, was counted under Holiday Inns, Inc. only. Systems managing properties included in the above counts (i.e., duplicate listings) include Allen & O'Hara, Inc., Brock Hotel Corporation, The Continental Companies, Hospitality Enterprises, Inc., MHM, Inc., Midway Hospitality Corporation, Midway Management Group, Inc., The Musikantow Corporation, Northern Michigan Inns, Inc., Pace Management Service Corporation, Servico, Inc., Sunbelt Motor Inns, Westbrooke Inns Management, Inc., Upton Inns, Inc., and Winegardner & Hammons, Inc.

SOURCE: American Hotel and Motel Association. 1985. 1985 Directory of Hotel and Motel Systems. New York: American Hotel Association Directory Corporation.

Table 7-3. Growth in the supply of affiliated commercial lodging in Michigan, 1975-1985.

YEAR OF PUBLI- CATION	NO. HOTEL/MOTEL SYSTEMS WITH AT LEAST ONE PROPERTY IN MI ¹	NO. AFFIL- IATED PROPERTIES IN MI	NO. AFFIL- IATED ROOMS IN MI	PERCENT CHANGE FROM PREVIOUS YEAR IN...			AVERAGES		
				Number Of Systems	Number Of Properties	Number Of Rooms	Properties Per System	Rooms Per System	Rooms Per Property
1975	28	175	24,402				6.2	871.5	139.4
1976	26	181	23,024	-7.1	3.4	-5.6	6.9	885.5	127.2
1977	30	222	27,497	15.3	22.6	19.4	7.4	916.6	123.9
1978	31	220	27,195	3.3	-0.9	-1.1	7.1	877.3	123.6
1979	34	222	25,779	9.7	0.9	-5.2	6.5	758.2	116.1
1980	32	211	26,629	-5.9	-4.9	3.2	6.6	832.2	126.2
1981	30	217	27,940	-6.2	2.8	4.9	7.2	931.3	128.8
1982	35	227	28,709	16.6	4.6	2.7	6.5	820.3	126.5
1983	35	236	29,222	0.0	3.9	1.8	6.7	834.9	123.8
1984	35	249	29,617	0.0	5.5	1.3	7.1	846.2	118.9
1985	41	266	32,590	17.1	6.8	10.0	6.5	794.9	122.5

¹ A "hotel/motel system" is a system operating three or more hotels, motels or resorts, at least one of which is located in Michigan. This definition includes referral groups and managing companies managing one or more properties not listed elsewhere in the source.

NOTE: A property that is part of a chain but owned by a management company is listed in the source under both the chain and the management company. Such duplicate listings were deleted in making the above counts, so that in a given year each affiliated lodging establishment in Michigan was counted only once.

SOURCE: Derived from information presented in the American Hotel and Motel Association's annual Directory of Hotel and Motel Systems. New York: American Hotel Association Directory Corporation.

rooms. The overall growth of the budget lodging industry in Michigan has been dramatic during the 1980's as economic conditions have improved and firms such as Super 8 have aggressively franchised. Organizations noted for their "rooms only" approach to product development, such as Excel Inns, Budgetel, and Dillon Inns, have ventured into Michigan from their Wisconsin bases to locate near larger, full-service establishments in Michigan's major metropolitan areas. Budget systems comprise almost 60% of the lodging systems that started doing business in Michigan during the period 1975-1985.

Several lodging organizations have made major adjustments in their presence in the Michigan market during the past decade. Both the Sheraton and Hilton systems have gradually moved from a predominantly southeast Michigan orientation to a strong presence in Michigan's outstate urban areas. In 1975, both Sheraton and Hilton were operating a combined total of nearly 2,000 rooms in downtown Detroit. A decade later, Sheraton's newest properties are in excess of 200 rooms and most of these properties have opened in the last four years. Between 1975 and 1985, the number of Hilton properties more than doubled and the corresponding room supply increased by 1,100 rooms. Hilton now ranks third in total room supply among lodging systems operating in Michigan (Table 7-2).

In the mid-priced lodging market, Holiday Inns, Ramada Inns, and Howard Johnson's all experienced declines in the number of properties as well as the number of guest rooms from 1975 through 1985. In contrast, the Quality Inns system, including Quality Inns and Comfort Inns, showed dramatic gains in both categories as they joined eleven other lodging systems operating over 1,000 rooms in Michigan.

The development of specialized lodging products with distinct features to appeal to specific economic segments of the traveling public is a national trend influencing the state's industry. Since 1983, the Residence Inn Corporation has pioneered the development of the all-suite hotel in Michigan, and new limited-service properties with such identities as Hampton Inn and Marriott's Courtyard will be accommodating travelers in 1986.

Number of Firms and Jobs in the Industry

According to the U.S. Bureau of the Census, in 1983 that portion of Michigan's hotel, motel, and tourist court industry (SIC 701) which paid Social Security (FICA) taxes consisted of 1,149 establishments, employed 20,464 persons, and disbursed a total payroll of \$176 million (Table 7-4). Between 1976 and 1981 there was a steady decline in the number of establishments in this portion of the industry, but this trend appears to have reversed itself in more recent years. In each of the years 1974-1983, the majority of the establishments in this portion of the industry employed fewer than five persons.

Table 19-6 (page 245) shows the average number of jobs in Michigan's hotel, motel, and tourist court industry (SIC 701) for each month of each of the years 1974-1984.² These data show a steady growth in the annual average number of jobs in the industry

²These data differ somewhat from the data on number of employees in Table 7-4 because: (1) the latter records the number of employees in the industry during a specific one-week period, whereas Table 19-6 records the average number of jobs during specific one-month periods, (2) data in Table 7-4 for 1974-1982 only reflect the number of employees in establishments that were active as of December 15 of a given year, and (3) data in Table 7-4 cover only establishments which paid Social Security (FICA) taxes.

Table 7-4. Selected characteristics of Michigan's hotel, motel, and tourist court industry (SIC 701), 1974-1983.

Year	Number of employees for week including March 12	Annual Payroll (\$000)	Number of establishments	Percentage of establishments employing...								
				1-4 persons	5-9 persons	10-19 persons	20-49 persons	50-99 persons	100-249 persons	250-499 persons	500-999 persons	1000+ persons
1974	20,105	85,644	1,159	59.5	12.3	11.0	7.8	5.4	3.30	0.60	0.1	0.0
1975	19,560	87,949	1,134	60.6	12.3	10.1	8.4	4.5	3.50	0.60	0.0	0.0
1976	20,262	97,423	1,173	62.1	10.9	10.3	7.4	5.8	2.60	0.90	0.0	0.0
1977	23,003	114,770	1,136	59.7	11.4	10.4	8.0	6.2	3.30	0.90	0.0	0.1
1978	24,413	130,350	1,114	56.5	14.1	9.5	9.6	5.5	3.80	1.00	0.0	0.1
1979	24,122	150,575	1,038	56.5	11.7	10.9	9.8	5.8	3.80	1.30	0.1	0.1
1980	23,400	153,612	994	56.3	12.0	11.3	10.2	4.7	4.20	1.10	0.0	0.2
1981	21,865	161,324	974	57.3	11.5	11.0	10.9	4.6	3.50	1.00	0.1	0.1
1982	22,034	159,148	1,013	56.5	13.6	9.6	10.1	5.3	3.50	1.20	0.1	0.2
1983	20,464	176,041	1,149	60.0	12.8	9.5	9.5	3.8	3.60	0.50	0.3	0.0

NOTE: Prior to 1983, establishment counts were based on a determination of active status as of December 15 of a given year. Beginning with 1983, establishment counts were based on a determination of active status as of anytime during the year. All data in this table cover only establishments which paid Social Security (FICA) taxes.

SOURCE: U.S. Dept. of Commerce, Bureau of the Census. County Business Patterns: Michigan. Annual, Table 18.

from 1974 through 1979. This was followed by a decline in annual average employment through 1982, possibly due to the recession, and then increases in employment in 1983 and 1984, possibly due to the recovery. In each of the years 1974-1984, the data display a seasonal pattern with the average number of jobs in the industry consistently peaking in July or August.

Performance of the Industry

Periodic reports prepared by Laventhol & Horwath provide some insights into the performance of Michigan's lodging industry. Overall occupancy increased from 62.2% in 1983 to 66.2% in 1984, and sales per occupied room, or average rate, increased by 8.4% to \$45.82 (Table 7-5). During this period chain properties experienced a greater increase in occupancy than independent establishments, but the latter experienced a greater increase in average rate. Among the five locational categories, only center city properties exhibited a decline in occupancy from 1983 to 1984. Airport locations registered occupancies of 73.9% in 1983 and 82.0% in 1984. In both years these occupancy rates were higher than those of any other locational category.

Although chain properties had higher occupancy rates than independents in 1984, the latter's average 1984 room rate of \$50.63 was 15% higher than the average room rate of chain properties. Average 1984 room rates of center city and resort locations exceeded those of other locations by more than 26%.

Monthly occupancy rates in the May through October period of 1984 exceeded the overall annual rate in the case of both chain and independent properties (Table 7-6). Occupancy at center city locations peaked during October, probably because of increases in convention activity. Resort occupancy peaked in July at 83.9%. Airport properties exhibited the least variation in monthly occupancy during the course of the year. Southeast Michigan led all geographic zones with an annual rate of 73.5%, ranging from a low of 53.5% in December to a high of 81.7% in September.

The average rate of center city properties peaked in April and October, whereas the average rate of resort properties peaked in July at \$77.01 (Table 7-7). The latter is the highest average rate of any category in the table. Average rates were higher in the north zone than in other regions of the state during the June through October vacation and pleasure travel period. Properties in the north zone consequently also had the highest average rates on an annual basis.

Lodging Hospitality magazine annually conducts a mail survey of its U.S. subscribers and reports the characteristics of 400 respondent properties it considers "top performers" on the basis of sales per guestroom. Nine Michigan properties were included among the 400 "top performers" in 1984, and ten Michigan properties were included among the 400 "top performers" in 1985. Four Michigan properties were "top performers" in both 1984 and 1985. In both years Michigan's "top performers" included center city, resort, suburban, and highway properties. And in both years the top six Michigan performers, on the basis of total sales per room, were non-franchised operations. Weber's Inn of Ann Arbor had the highest total sales per room of Michigan's "top performers" in 1984, and the St. Clair Inn of St. Clair had the highest total sales per room of Michigan's "top performers" in 1985 (Table 7-8). In 1985 the "top performers" located in Michigan had a combined total sales volume of nearly \$60 million and employed an average of 1.3 persons per guestroom/suite.

Table 7-5. Occupancy rates, average rates, and room sales per guest for various types of lodging establishments in Michigan, 1983 and 1984.

TYPE OF ESTABLISHMENT	OCCUPANCY PERCENT		DOUBLE OCCUPANCY PERCENT		ROOM SALES PER OCCUPIED ROOM (Average Rate)		ROOM SALES PER GUEST	
	1984	1983	1984	1983	1984	1983	1984	1983
TOTAL	66.2	62.2	42.4	43.4	\$45.82	\$42.26	\$33.24	\$30.60
AFFILIATION								
Chain	69.7	64.1	35.6	37.6	\$44.02	\$40.88	\$32.82	\$30.28
Independent	58.3	57.7	59.0	57.6	50.63	45.98	34.10	31.29
LOCATION								
Center City	56.0	56.9	43.6	45.0	\$55.16	\$50.34	\$39.01	\$35.29
Suburban	70.1	64.0	37.1	38.7	43.54	40.00	33.07	30.25
Airport	82.0	73.9	16.7	15.8	43.38	39.87	35.02	33.23
Highway	66.6	61.2	39.7	40.7	36.68	34.76	26.67	25.17
Resort	61.0	57.2	92.3	93.7	56.94	52.22	29.63	26.97
OCCUPANCY								
Under 55.7%	43.6	44.5	47.5	50.7	\$48.19	\$44.54	\$33.76	\$30.47
55.7 to 68.4%	62.3	58.4	43.1	42.3	46.53	42.65	33.67	31.56
68.4 to 80.3%	74.4	67.5	41.6	41.8	45.55	42.11	33.31	30.58
Over 80.3%	87.3	79.8	38.7	40.2	44.17	40.73	32.35	29.83
ROOM RATE								
Under \$32.10	62.5	55.6	40.0	41.4	\$24.87	\$27.15	\$18.23	\$21.11
\$32.10 to \$39.63	61.9	57.3	37.7	38.7	36.07	34.29	26.11	24.92
\$39.63 to \$46.35	72.2	65.4	39.0	40.1	43.13	40.50	31.01	28.91
Over \$46.35	64.8	64.3	47.4	48.1	58.63	51.40	40.53	35.65
SIZE								
Under 50 Rooms	64.9	65.2	66.9	61.1	\$31.24	\$28.46	\$17.07	\$16.19
50-99 Rooms	64.4	65.3	53.3	48.7	32.84	31.05	25.47	24.82
100-300 Rooms	66.3	61.8	41.4	42.8	47.24	43.63	33.99	31.23
TYPE								
Hotel	60.2	57.3	43.7	44.8	\$51.03	\$46.46	\$35.77	\$32.55
Motor Hotel	74.1	68.8	41.2	42.4	41.87	39.12	29.93	28.07
Economy	68.6	61.9	29.6	27.8	26.59	26.49	22.38	22.39
ZONE								
North	60.8	58.9	92.4	92.1	\$51.23	\$46.07	\$27.67	\$25.12
West	58.1	57.7	47.1	50.1	47.70	43.22	34.13	30.80
East	62.1	56.4	40.6	42.3	41.03	37.51	30.47	27.28
Southeast	73.5	67.6	28.0	28.6	45.67	42.80	36.01	33.92

NOTE: Data are based on a sample of lodging establishment which may not be representative of all lodging establishments in Michigan. Moreover, the character of the sample may have changed slightly over time due to some establishments dropping out and being replaced by others.

SOURCE: Laventhol and Horwath. Michigan Trend of Business: Lodging Industry. December 1984. Volume 5, No. 12. Reprinted with permission.

Table 7-6. Overall occupancy rates of various types of lodging establishments in Michigan by month, 1984.

TYPE OF ESTABLISHMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TOTAL	56.3	63.0	63.4	58.8	69.3	74.4	69.4	74.6	71.9	72.7	60.4	46.1
AFFILIATION												
Chain	60.0	67.3	66.5	61.4	71.5	75.9	71.5	77.6	73.4	75.6	65.1	49.6
Independent	47.5	52.5	57.5	53.4	63.3	71.2	62.6	70.1	68.7	66.1	49.4	39.5
LOCATION												
Center City	46.5	49.6	55.8	51.8	60.2	65.7	55.5	58.3	59.9	70.5	52.7	41.4
Suburban	56.8	67.4	69.4	66.1	74.9	77.4	70.4	79.6	74.7	77.4	65.5	51.1
Highway	57.0	61.0	68.5	59.7	67.3	76.0	73.3	79.5	72.5	70.0	57.6	50.4
Airport	75.4	81.2	75.7	71.5	79.8	84.1	78.0	85.4	84.9	*	82.7	N.A.
Resort	49.6	67.2	56.2	51.7	61.4	74.1	83.9	*	*	*	*	36.9
SIZE												
Under 150 rooms	56.0	61.1	61.2	59.4	67.9	73.6	73.8	78.8	N.A.	72.3	57.4	N.A.
150-300 rooms	61.7	67.7	66.9	63.5	72.8	76.5	68.5	78.3	N.A.	77.6	67.9	N.A.
300-600 rooms	51.2	*	60.8	57.1	67.3	73.4	74.1	*	N.A.	73.2	48.2	N.A.
ZONE												
North	49.6	65.1	56.5	53.2	61.8	73.1	83.8	89.3	73.5	66.6	27.7	36.9
West	47.1	50.7	58.6	53.0	64.6	68.1	59.0	63.5	61.4	65.1	51.5	40.5
East	49.9	57.1	59.5	53.4	65.0	65.2	63.3	69.1	66.1	73.1	58.1	46.4
Southeast	63.8	70.9	71.5	67.2	75.0	79.2	74.4	80.5	81.7	81.2	71.3	53.5

* Insufficient response

NOTE: Data are based on a sample of lodging establishments which may not be representative of all lodging establishments in Michigan. Also, the character of the sample may have been changed slightly over time due to some establishments dropping out and being replaced by others.

SOURCE: Laventhal and Morwath. Michigan Trend of Business: Lodging Industry, monthly. Reprinted with permission.

Table 7-7. Room sales per occupied room (average rate) of various types of lodging establishments in Michigan by month, 1984.

TYPE OF ESTABLISHMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TOTAL	\$43.53	\$42.87	\$44.48	\$45.76	\$46.28	\$46.92	\$48.10	\$47.16	\$47.10	\$50.34	\$46.15	\$47.55
AFFILIATION												
Chain	\$43.31	\$41.87	\$43.53	\$43.22	\$45.60	\$47.71	\$48.40	\$43.06	\$44.05	\$47.70	\$44.41	\$45.30
Independent	44.20	46.01	46.57	51.65	48.40	45.22	46.99	54.09	53.70	57.33	51.44	52.95
LOCATION												
Center City	\$51.00	\$52.01	\$54.06	\$59.12	\$56.30	\$49.19	\$51.16	\$53.51	\$56.52	\$58.48	\$54.29	\$56.22
Suburban	44.10	41.41	39.75	39.93	45.25	45.48	45.53	42.52	41.59	42.93	44.10	45.80
Highway	36.70	38.32	39.74	38.75	38.76	41.38	38.72	35.72	37.87	43.67	37.50	38.68
Airport	42.01	39.60	42.02	43.00	43.82	44.84	43.56	38.56	43.39	*	48.74	N.A.
Resort	44.36	42.12	41.95	39.91	45.61	64.88	77.01	*	*	*	*	50.70
SIZE												
Under 150 Rooms	\$35.61	\$36.05	\$35.37	\$37.78	\$37.73	\$41.11	\$39.53	\$37.74	N.A.	\$37.78	\$36.37	N.A.
150 to 300 Rooms	42.61	42.74	43.98	44.78	45.30	45.49	45.87	45.89	N.A.	49.76	47.57	N.A.
300 to 600 Rooms	53.21	*	46.48	52.21	53.46	48.53	60.07	*	N.A.	60.14	47.20	N.A.
ZONE												
North	\$41.93	\$40.15	\$39.81	\$38.83	\$42.52	\$59.23	\$71.81	\$67.02	\$64.65	\$55.89	\$42.05	\$50.70
West	45.61	48.45	50.18	48.58	50.41	53.36	46.32	45.60	48.94	49.72	48.87	50.05
East	40.70	40.32	45.03	43.33	42.59	43.35	40.80	40.31	41.98	43.05	41.33	41.55
Southeast	43.97	42.13	42.46	47.18	46.70	44.37	46.35	44.76	44.56	53.34	46.76	47.93

* Insufficient response

NOTE: Data are based on a sample of lodging establishments which may not be representative of all lodging establishments in Michigan. Also, the character of the sample may have changed slightly over time due to some establishments dropping out and being replaced by others.

SOURCE: Laventhol and Horwath. Michigan Trend of Business: Lodging Industry, monthly. Reprinted with permission.

Table 7-8. Characteristics of "top performing" lodging establishments in Michigan, 1984 and 1985.

Establishment	No. Guest-Rooms and Suites	Total Sales/Room(\$)	Total Sales (\$000)	Guestroom Sales (\$000)	Food and Beverage Sales(\$000)	Other Revenues (\$000)	Average Occupancy (%)	Number of Employees
1984 LODGING HOSPITALITY SURVEY								
Amway Grand Plaza Hotel, Grand Rapids	682	30,791	21,000	9,000	11,000	1,000	60	1,100
Holiday Inn-Livonia West, Livonia	231	30,303	7,000	4,000	3,000	0	82	176
Ann Arbor Marriott, Ann Arbor	229	21,965	5,030	2,730	2,300	0	70	175
The Dearborn Inn, Dearborn	179	35,972	6,439	2,620	3,499	320	78	225
Kingsley Inn, Bloomfield Hills	171	31,660	5,414	1,772	3,536	106	65	180
Midway Motor Lodge, Grand Rapids	148	24,128	3,571	1,465	2,017	89	66	130
Weber's Inn, Ann Arbor	125	41,216	5,152	1,538	3,614	0	74	200
St. Clair Inn, St. Clair	94	40,968	3,851	1,135	2,703	13	65	167
Point West Inn, Macatawa	66	38,590	2,547	878	1,618	51	64	150
1985 LODGING HOSPITALITY SURVEY								
Amway Grand Plaza Hotel, Grand Rapids	682	32,258	22,000	9,000	12,000	1,000	60	1,100
Sheraton Inn-Lansing, Lansing	223	26,905	6,000	3,000	3,000	0	70	190
Midland Holiday Inn, Midland	180	24,294	4,373	2,600	1,570	203	86	145
Kingsley Inn Hotel, Bloomfield Hills	156	39,743	6,200	2,100	4,000	100	69	180
Best Western Midway Motor Lodge, Lansing	154	25,162	3,875	1,900	1,975	0	74	125
Holiday Inn Benton Harbor, Benton Harbor	120	27,333	3,280	1,650	1,600	30	81	140
Hotel St. Regis, Detroit	117	34,188	4,000	2,000	1,800	200	61	132
St. Clair Inn, St. Clair	94	45,968	4,321	1,323	2,998	0	68	165
Rotsford Inn, Farmington Hills	75	28,000	2,100	600	1,500	0	80	60
Point West Inn, Macatawa	66	45,954	3,033	1,019	1,941	73	68	160

SOURCES: Askin, Patricia. 1984. "Lodging's 400 Top Performers." Lodging Hospitality. 40(8): 34-59. Reprinted with permission.

Askin, Patricia. 1985. "Lodging's 400 Top Performers." Lodging Hospitality. 41(8): 46-83. Reprinted with permission.

Preferences for Lodging Amenities

A survey conducted by Michigan State University in the central Upper Peninsula during the winter of 1984-85 (Spotts and Mahoney, 1985) measured travelers' preferences for various lodging amenities. The results of this research are shown in Table 7-9. While these statistics of course may not be fully generalizable to other seasons and other regions in Michigan, they at least provide some food for thought for the state's lodging industry as a whole. Moreover, they are the only current, publicly available statistics on the lodging preferences of travelers in Michigan.

The survey involved contacting travel parties at various restaurants, motels, hotels, and attractions in the counties of Alger, Luce, and Schoolcraft, and asking them to fill out a self-administered questionnaire. Only one questionnaire was completed by a given travel party contacted. A total of 390 completed questionnaires were obtained. Surveying took place between December 16, 1984 and March 30, 1985.

Special procedures were employed to facilitate the collection of a large amount of data on travelers' lodging preferences. A list of 23 hotel/motel amenities about which respondents could be asked to state their preferences was developed. Nine of these amenities were included in half the questionnaires that were printed, nine were included in the other half of the questionnaires, and five were included in all questionnaires. Forty-nine percent of the sample completed one version of the questionnaire, and 51% completed the other version of the questionnaire.

Information on lodging preferences was elicited only from travel parties who stated that they either had patronized or would patronize a motel or hotel on their trip. These travel parties were asked, "How important is each of the following features to your group when selecting a motel or hotel to stay at on this trip?" A list of 14 amenities followed with spaces for respondents to indicate whether each amenity was "not at all important," "somewhat important," "very important," or "crucial (won't stay at a motel or hotel without it)."

The majority of the respondents that completed a given version of the questionnaire stated that when selecting a motel or hotel to stay at on their trip a washer/dryer, whirlpool, sauna, heated indoor pool, winter plug-in, free continental breakfast, storage facility for recreational vehicle or equipment, in-room refrigerator, or in-room kitchenette was "not at all important." The majority of the respondents placed at least some importance on AAA approval, acceptance of major credit cards, the availability of ice, make-your-own coffee in rooms, cable color TVs in rooms, individually-controlled thermostats, a restaurant in the facility, a lounge/bar in the facility, food and beverage vending machines, "800" phone numbers for reservations, and combination tub/showers. The amenities that most respondents considered most important were acceptance of major credit cards, the availability of ice, TVs in room, TV movie channels, direct-dial phones, individually-controlled thermostats, and combination tub/showers. Individually-controlled thermostats and combination tub/showers seem to be especially important.

The preferences of travel parties that stated "business only" as the purpose of their trip differed from those of other travel parties in the case of only a few amenities. Business travelers, compared to other travelers, placed greater importance on acceptance of major credit cards and in-room direct-dial phones, somewhat more importance on a lounge/bar in the facility, and less importance on a storage facility for one's recreational vehicle or equipment.

Table 7-9. Lodging preferences of winter travel parties in the central Upper Peninsula of Michigan¹

HOTEL/MOTEL AMENITY	ALL TRAVEL PARTIES ²	PURPOSE OF TRIP: "Busi- ness Only"	Other Than "Business Only"	Chi Square	Signifi- cance
COIN-OPERATED WASHER AND DRYER	N=299	N=80	N=219		
Not at all important	77%	78%	78%		
Somewhat important	19	20	18		
Very important	3	1	4		
Crucial (won't stay at motel/hotel without it)	1	1	0	1.77	.621
Total	100%	100%	100%		
WHIRLPOOL	N=141	N=37	N=104		
Not at all important	66%	67%	66%		
Somewhat important	23	30	20		
Very important	8	0	11		
Crucial (won't stay at motel/hotel without it)	3	3	3	5.02	.171
Total	100%	100%	100%		
SAUNA	N=136	N=35	N=101		
Not at all important	71%	66%	73%		
Somewhat important	22	31	19		
Very important	5	3	6		
Crucial (won't stay at motel/hotel without it)	2	0	2	3.26	.354
Total	100%	100%	100%		
HEATED INDOOR POOL	N=301	N=81	N=220		
Not at all important	59%	52%	61%		
Somewhat important	29	37	27		
Very important	9	9	9		
Crucial (won't stay at motel/hotel without it)	3	2	3	3.03	.387
Total	100%	100%	100%		
AAA APPROVAL	N=140	N=38	N=102		
Not at all important	40%	42%	38%		
Somewhat important	32	37	30		
Very important	22	13	26		
Crucial (won't stay at motel/hotel without it)	6	8	6	2.54	.468
Total	100%	100%	100%		
MAJOR CREDIT CARDS ACCEPTED	N=144	N=38	N=106		
Not at all important	20%	11%	24%		
Somewhat important	22	10	25		
Very important	41	50	38		
Crucial (won't stay at motel/hotel without it)	17	29	13	10.29	.016
Total	100%	100%	100%		
ICE AVAILABLE	N=141	N=39	N=102		
Not at all important	29%	31%	29%		
Somewhat important	30	33	28		
Very important	30	18	34		
Crucial (won't stay at motel/hotel without it)	11	18	9	4.89	.180
Total	100%	100%	100%		
WINTER PLUG-INS (to keep vehicle engine warm)	N=139	N=37	N=102		
Not at all important	55%	43%	60%		
Somewhat important	27	43	20		
Very important	14	8	16		
Crucial (won't stay in motel/hotel without it)	4	6	4	7.86	.049
Total	100%	100%	100%		

Table 7-9. Lodging preferences of winter travel parties in the central Upper Peninsula of Michigan¹
(continued).

HOTEL/MOTEL AMENITY	ALL TRAVEL PARTIES ²	PURPOSE OF TRIP: "Busi- ness Only"	Other Than "Business Only"	Chi Square	Signifi- cance
MAKE-YOUR-OWN COFFEE IN ROOM	N=303	N=81	N=222		
Not at all important	42%	44%	41%		
Somewhat important	34	33	35		
Very important	20	20	20		
Crucial (won't stay at motel/hotel without it)	4	3	4	.62	.892
Total	100%	100%	100%		
CABLE COLOR TELEVISION IN ROOM	N=142	N=40	N=102		
Not at all important	10%	5%	12%		
Somewhat important	30	33	29		
Very important	49	50	49		
Crucial (won't stay at motel/hotel without it)	11	12	10	1.63	.653
Total	100%	100%	100%		
COLOR TV IN ROOM WITH CABLE OR SATELLITE MOVIE CHANNEL	N=139	N=39	N=100		
Not at all important	18%	13%	20%		
Somewhat important	42	39	43		
Very important	32	38	29		
Crucial (won't stay at motel/hotel without it)	8	10	8	1.90	.593
Total	100%	100%	100%		
QUEEN-SIZE BED(S) IN ROOM	N=144	N=37	N=107		
Not at all important	31%	24%	34%		
Somewhat important	35	35	35		
Very important	27	33	25		
Crucial (won't stay at motel/hotel without it)	7	8	6	1.39	.708
Total	100%	100%	100%		
24-HOUR DIRECT-DIAL TELEPHONE IN ROOM	N=302	N=83	N=219		
Not at all important	25%	10%	31%		
Somewhat important	30	18	34		
Very important	31	40	28		
Crucial (won't stay at motel/hotel without it)	14	32	7	46.13	.000
Total	100%	100%	100%		
INDIVIDUALLY CONTROLLED THERMOSTAT IN ROOM	N=304	N=83	N=221		
Not at all important	5%	5%	5%		
Somewhat important	15	13	16		
Very important	52	46	54		
Crucial (won't stay at motel/hotel without it)	28	36	25	3.48	.323
Total	100%	100%	100%		
RESTAURANT IN MOTEL OR HOTEL	N=161	N=44	N=117		
Not at all important	26%	18%	29%		
Somewhat important	49	52	47		
Very important	24	30	22		
Crucial (won't stay at motel/hotel without it)	1	0	2	3.09	.377
Total	100%	100%	100%		
LOUNGE/BAR IN MOTEL OR HOTEL	N=160	N=44	N=116		
Not at all important	49%	34%	55%		
Somewhat important	35	52	28		
Very important	14	14	14		
Crucial (won't stay at motel/hotel without it)	2	0	3	9.18	.027
Total	100%	100%	100%		
FREE CONTINENTAL BREAKFAST	N=158	N=44	N=114		
Not at all important	66%	59%	68%		
Somewhat important	26	34	24		
Very important	7	7	7		
Crucial (won't stay at motel/hotel without it)	1	0	1	2.10	.552
Total	100%	100%	100%		

Table 7-9. Lodging preferences of winter travel parties in the central Upper Peninsula of Michigan¹
(continued).

HOTEL/MOTEL AMENITY	ALL TRAVEL PARTIES ²	PURPOSE OF TRIP: "Busi- ness Only"	Other Than "Business Only"	Chi Square	Signifi- cance
FOOD & BEVERAGE VENDING MACHINES	N=158	N=44	N=114		
Not at all important	36%	39%	35%		
Somewhat important	45	39	47		
Very important	17	18	17		
Crucial (won't stay at motel/hotel without it)	2	4	1	2.94	.401
Total	100%	100%	100%		
RESERVATIONS CAN BE MADE BY CALLING A TOLL-FREE "800" TELEPHONE NUMBER	N=158	N=44	N=114		
Not at all important	38%	39%	39%		
Somewhat important	36	36	36		
Very important	25	23	25		
Crucial (won't stay at motel/hotel without it)	1	2	0	2.69	.443
Total	100%	100%	100%		
STORAGE FACILITY FOR RECREATIONAL VEHICLE OR EQUIPMENT	N=153	N=41	N=112		
Not at all important	54%	78%	45%		
Somewhat important	25	17	29		
Very important	17	5	21		
Crucial (won't stay in motel/hotel without it)	4	0	5	14.84	.002
Total	100%	100%	100%		
REFRIGERATOR IN ROOM	N=155	N=43	N=112		
Not at all important	62%	70%	59%		
Somewhat important	27	28	27		
Very important	8	2	10		
Crucial (won't stay at motel/hotel without it)	3	0	4	4.75	.191
Total	100%	100%	100%		
KITCHENETTE (REFRIGERATOR, STOVE, UTENSILS, DISHES, ETC.) IN ROOM	N=157	N=43	N=114		
Not at all important	78%	88%	75%		
Somewhat important	16	12	17		
Very important	4	0	5		
Crucial (won't stay at motel/hotel without it)	2	0	3	4.84	.184
Total	100%	100%	100%		
COMBINATION BATHTUB/SHOWER IN ROOM	N=159	N=44	N=115		
Not at all important	7%	7%	7%		
Somewhat important	13	16	12		
Very important	47	39	50		
Crucial (won't stay at motel/hotel without it)	33	38	31	1.67	.644
Total	100%	100%	100%		

¹Alger, Luce, and Schoolcraft counties.

²All travel parties that spent one or more nights in a motel or hotel on their trip.

SOURCE: Spotts, Daniel M. and Edward M. Mahoney. 1985. "Tri-County Tourism Research Project: Preliminary Results of Summer, Fall, and Winter Surveys." Unpublished report, Department of Park and Recreation Resources, Michigan State University, East Lansing.

References

- Ayres, Lewis, Norris, & May, Inc. 1981. Energy Conservation in Hotels and Motels. Sponsored by Energy Administration, Michigan Department of Commerce.
- Beals, Paul and David A. Troy. 1982. "Hotel Feasibility Analysis, Part I." The Cornell Hotel and Restaurant Administration Quarterly, 23:11-17.
- Beals, Paul and David A. Troy. 1982. "Hotel Feasibility Analysis, Part II." The Cornell Hotel and Restaurant Administration Quarterly, 23:58-64.
- Crystler, Julia. 1983. Situation Analysis Workbook. 1983. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Educational Institute of the American Hotel and Motel Association. n.d. Selling Out: A How-To Manual on Reservations Management. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Eudy, Charles L. 1985. A Practical Guide to Automating the Hotel Sales Office. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- "Financial Management." Lodging Reprint No. 20. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- "Hotel Liability." Lodging Reprint No. 30. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- "How to Analyze Financial Statements." Lodging Reprint No. 34. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- "How to Train Hotel/Motel Employees." Lodging Reprint No. 33. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Jefferies, Jack P. 1983. Understanding Hotel/Motel Law. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Lattin, Gerald. W. 1985. The Lodging and Food Service Industry. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Laventhol & Horwath. 1984. Hotel/Motel Development. Washington, D.C.: ULI-the Urban Land Institute.
- Marino, Mary Lou and Daniel E. Chappelle. 1978. "Lodging and Restaurant Establishment Spending Patterns in Northwest Lower Michigan." Michigan State University Agricultural Experiment Station Research Report 346. East Lansing.
- "Marketing Strategies for Hotels & Motels." Lodging Reprint No. 26. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- McIntosh, Robert W., Jay S. Durling, and Robert P. Sposito. 1974. "In the Lodging Industry...Vacation Packaging." Extension Bulletin E-793. Cooperative Extension Service, Michigan State University. East Lansing.

McIntosh, Robert W. 1977. "General Michigan and Federal Laws ... in the Lodging Industry." Extension Bulletin E-1171. Cooperative Extension Service, Michigan State University. East Lansing.

McIntosh, Robert W. n.d. "In the Lodging Industry ... Marketing Management." Extension Bulletin E-677. Cooperative Extension Service, Michigan State University. East Lansing.

Michigan Department of Commerce, Travel Bureau. n.d. Tourist Industry Growth Study: A Report to the Upper Great Lakes Regional Planning Commission. Lansing, MI: Michigan Travel Bureau.

_____. n.d. Michigan: A Guide to Hotels and Motels. Lansing, MI: Michigan Travel Bureau.

_____. n.d. Michigan: A Guide to Cabins and Cottages. Lansing, MI: Michigan Travel Bureau.

_____. 1983. "Statewide Lodging Supply." Lansing, MI: Michigan Travel Bureau.

"Profitable Operation of Smaller Hotels/Motels." Lodging Reprint No. 25. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.

Smith, Stephen L. 1975. "An Evaluation of the Potential for Expansion of the Overnight Accommodations Industry in Rural Michigan Counties: A Resource Perspective." Final Report prepared for the Upper Great Lakes Regional Commission, T.A. Project No. 10420233.

Spotts, Daniel M. and Edward M. Mahoney. 1985. "Tri-County Tourism Research Project: Preliminary Results of Summer, Fall, and Winter Surveys." Unpublished report, Dept. of Park and Recreation Resources, Michigan State University, East Lansing.

Steadman, Charles E. 1985. Managing Front Office Operations. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.

Troy, David A. 1985. Strategic Hotel/Motel Marketing. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.

U.S. Dept. of Energy. 1980. Saving Money With Energy Conservation: An Energy Audit Workbook for Hotels and Motels. Publication DOE/CS-0140. Washington, D.C.: U.S. Dept. of Energy, Assistant Secretary for Conservation and Solar Energy, State Energy Conservation Programs Division.

CHAPTER 8

BED AND BREAKFAST ESTABLISHMENTS IN MICHIGAN

Edward M. Mahoney

Introduction

A Bed and Breakfast establishment (B&B) provides guests with a room, access to a bathroom, some type of breakfast, and the hospitality of a host who usually resides in the house in which the B&B is operated. B&Bs have been popular in Europe for many years as an economical type of accommodation. During the 1980's their popularity increased in the U.S., especially in New England and California.

The number of B&Bs in Michigan has increased significantly in recent years. A 1984 study (Mahoney and Norman, 1986) identified 65 B&Bs in Michigan. At the end of 1985 there were approximately 110 in operation, an increase of about 70%. Most B&Bs are located in southwest and northwest lower Michigan, although a number have recently opened in and around Frankenmuth and Flint.

The growth in the number of B&Bs has resulted in the formation of at least five reservation services in Michigan. These services promote their member B&Bs, screen guests, and take reservations in return for a percentage of the room rate. There are also several directories published and sold which list and describe B&Bs located in Michigan (e.g., Buzan and Howell, 1985).

There is considerable confusion regarding what constitutes a B&B and how B&Bs differ from motels, rooming houses, and guest houses. To remedy this situation, a bill has been drafted and will be introduced in the Michigan Senate in 1986 which defines a B&B as an owner-occupied private residence that offers eight or fewer rooms for rent to transient tenants with breakfast included in the room rate. The bill also establishes an inspection and permit system for the state's B&Bs.

Only one study of Michigan's Bed and Breakfast industry has been conducted (Mahoney and Norman, 1986). This 1984 study included an inventory of B&Bs which identified 65 establishments. Questionnaires were mailed to each of these establishments and 57 (88%) were returned. The results of this survey are summarized below. Although the number of B&Bs has increased since completion of the survey, contact with the new establishments indicates that their characteristics do not differ significantly from those operating at the time of the survey.

Survey Results

The recent growth in the number of B&Bs is reflected by the fact that in 1984 almost half (46%) had been in operation six or fewer months. Only a third (32%) had been operating two or more years. This means that approximately two thirds of Michigan's existing B&Bs have been in business three or fewer years. Consequently, it is still too early to reliably estimate occupancy rates or profitability. Established B&Bs located in resort areas report annual occupancy rates as high as 70% while charging more than \$60 per night. However, many new B&Bs in areas that do not attract many tourists are having difficulty renting rooms.

Physical Characteristics

There was considerable range in the number of rooms rented by Michigan B&Bs. Half (51%) rented five or fewer rooms (Table 8-1). Approximately a quarter (26%) had three or fewer guest rooms. Only 17% of the B&Bs rented ten or more rooms; it is probably more appropriate to refer to these as inns.

Table 8-1. Number of rooms rented by B&Bs in Michigan.

Number of Rooms	Percent of B&Bs	Cumulative Percent
1	3.5	3.5
2	14.0	17.5
3	8.8	26.3
4	15.8	42.1
5	8.8	50.9
6	10.5	61.4
7	8.8	70.2
8	8.8	78.9
9	3.5	82.5
10 or more	17.5	100.0
Total	100.0	
mean = 7		median = 5

Approximately a quarter (28%) of the B&Bs had private bathrooms for all guests (Table 8-2). Thirty-seven percent had shared-only bathrooms. The remaining 35% had some combination of private, shared guest, and shared guest-family bathrooms.

Table 8-2. Type of bathroom facilities in Michigan B&Bs.

Type	Percent of B&Bs
Private guest baths only	28
Shared guest baths only	37
Private and shared guest baths	28
Shared guest and family baths	7
Total	100

The vast majority of B&Bs were located in older Victorian-style houses. The average age of the buildings in which B&Bs were operated was 88 years (Table 8-3). Approximately 86% were located in buildings which were older than 60 years. Three-quarters of these buildings had national, state, or local historical significance. Approximately 12% were listed in the National Register of Historic Places and an additional 13% had applied for such listing.

Table 8-3. Age distribution of buildings in which Michigan B&Bs were operated.

Age	Percent of B&Bs	Cumulative Percent
Less than 20 years	5	5
20 to 39 years	2	7
40 to 59 years	7	14
60 to 79 years	25	39
80 to 99 years	37	76
100+ years	24	100
Total	100	
mean = 88 years		median = 84 years

Zoning of B&Bs

Zoning regulations have been and continue to be a barrier to opening B&Bs. Most zoning ordinances do not specifically mention B&Bs as a permitted use. There is also considerable concern about permitting B&Bs in residential areas even though this is where most large, historically significant homes are located. Consequently, prospective B&Bs frequently must request zoning changes or apply for special use permits. Several municipalities in Michigan have passed ordinances that permit B&Bs, including Petoskey, Owosso, and Frankenmuth.

Nearly half (46%) of B&Bs were located in residentially zoned areas (Table 8-4). Thirteen percent were located on agriculturally zoned land. Another 18% were in retail (13%) and commercially zoned (5%) areas.

Table 8-4. Zoning of land where B&Bs were located.

Zoning Classification	Percent of B&Bs
Residential	46
Agricultural	13
Retail Business	13
Commercial	5
Commercial-Residential	4
Retail-Residential	4
Multiple Family	4
Other	11
Total	100

Food Service in B&Bs

Under current Michigan health code regulations, B&Bs which do not have licensed and inspected food service facilities are only permitted to serve a continental breakfast consisting of juice, coffee/tea, and a commercially produced baked good. Almost three quarters of the B&Bs had domestic kitchens and therefore were restricted to serving only a continental breakfast or having meals provided by licensed food service companies/facilities. Twenty percent had licensed food service facilities; half of these had 10 or more rooms for rent (Table 8-5). Seven percent did not have cooking facilities on the premises and instead had food catered in or served to guests in adjoining restaurants. Only 16% of the B&Bs served food to the general public; the others restricted food service only to guests.

Table 8-5. Food service facilities in Michigan B&Bs.

Type of Food Service Facilities	Percent of B&Bs
Domestic Kitchen	73
Licensed Food Service Facility	20
No Cooking Facilities	7
Total	100

Approximately 69% provided guests with a continental breakfast included in the room rate (Table 8-6). A quarter (26%) provided a full breakfast with the room; five percent offered a full breakfast which was not included in the room rate. Eleven percent offered lunch and 18% served dinners for an extra charge.

Table 8-6. Type of food service offered to Michigan B&B guests.

Type of Food Service	Percent of B&Bs
Continental Breakfast with room	69
Full Breakfast with room	26
Full Breakfast extra	5
Lunch extra	11
Dinner extra	18
Total	100

Management Characteristics

Approximately half (52%) of the B&Bs were open all week on a year-round basis. The remaining 48% were open seasonally, usually May through October. Sixty-one percent required all guests to make reservations. An increasing number require either a full or partial deposit with the reservation and require two night stays on weekends. Twenty percent did not permit children under 12 years of age.

The prices charged by Michigan B&Bs varied significantly. In 1984 prices ranged from \$18 to \$110. The average price for single occupancy was \$41. The average double occupancy rate was \$49. Rates have not changed significantly since 1984. At the end of 1985, the most expensive room in a B&B was \$130.

Almost a third (32%) of the B&Bs had other businesses on the premises. These include gift shops, antique shops, and bakeries. Approximately half of the B&Bs employed persons other than family members; 31% of these had at least one full-time employee.

A quarter (24%) of B&B owners/operators considered themselves to be full-time innkeepers. Eleven percent were retired from other occupations. The others were employed full-time or part-time outside the house. The most common reason for opening a B&B was to provide supplemental family income (Table 8-7). Other important reasons included a chance to meet people and the opportunity and income to restore an historic building.

Table 8-7. Reasons cited by owners/operators for opening a B&B in Michigan.

Reason	Percent of B&B owners/operators
To provide supplemental family income	65
The opportunity to meet people	60
The opportunity to restore an historic building/house	37
To finance a home they otherwise could not afford to purchase and/or maintain	21
Tax advantages	19

Clientele

Over half (58%) of the people who stayed in Michigan B&Bs were couples under 60 years of age (Table 8-8). Couples over 60 comprised 14% of the guests. Only fifteen percent of the rooms were rented to families with children. Nearly half (48%) of the stays in B&Bs were one night in duration (Table 8-9). Approximately a third (33%) of the guests stayed two nights. Only eight percent stayed more than three nights.

Table 8-8. Type of guests staying at B&Bs in Michigan.

	Percent of Guests
Couples under 60	58
Couples over 60	14
Singles under 60	11
Families with children under 12	7
Families with children over 12	8
Singles over 60	2
Total	100

Table 8-9. Length of stays at B&Bs in Michigan.

Number of Nights	Percent of Guests
1	48
2	33
3	11
4-7	4
8+	4
Total	100

The Future of Michigan's B&Bs

The growth in the number of B&Bs will likely continue for several more years but probably not at the rate experienced between 1982 and 1985. The most significant growth will probably continue to occur in and around existing resort/vacation areas and where B&Bs are already operating. It can also be expected that many of the B&Bs opened during the last few years will go out of business due to low occupancy rates, increased insurance costs, and lower than expected revenues. The B&Bs which remain in business will likely increase their occupancy rates as more people become aware of this lodging alternative.

References

- Buzan, Norma Stephens. 1983. Bed & Breakfast North America: A Directory of Agencies and Small Inns with Comprehensive City Index. Second edition. Bloomfield Hills, MI: Betsy Ross Publications.
- Buzan, Norma and Bert Howell. 1985. Bed & Breakfast in Michigan and Surrounding Areas. Bloomfield Hills, MI: Betsy Ross Publications.

- Kimmons, Rebecca Halstead. 1985. "West Virginia's Bed & Breakfast Inns." Wonderful West Virginia. 49(7): 24-32.
- Mahoney, Edward M. and William Norman. 1986. "A Study of Michigan's Bed and Breakfast Industry." Unpublished report, Dept. of Park and Recreation Resources, Michigan State University. East Lansing.
- Rundback, Betty Revits and Nancy S. Ackerman. 1983. Bed & Breakfast USA: A Guide to Tourist Homes and Guest Houses. New York: E.P. Dutton, Inc.
- Sonke, Sarah W. and Patricia P. Wilson (eds.). 1984. A Treasury of Bed & Breakfast. Washington, D.C.: The American Bed & Breakfast Association.
- Stevens, Leslie B. 1983. "A Market Study of California Bed & Breakfast Inns." Unpublished report for M.B.A. degree, University of California, Berkley.
- Stevens, Leslie B. 1983. "B&Bs: A Booming Market." The Cornell Hotel and Restaurant Administration Quarterly. 24(3): 49-51.
- Stevens, Leslie B. 1984. "Bed and Breakfast Inns." In Laventhol and Horwath. California Lodging Industry 1983. First annual report on California hotel operations.

CHAPTER 9

EATING AND DRINKING PLACES IN MICHIGAN

Daniel M. Spotts

Michigan's eating and drinking places are an important component of the state's travel and tourism system. According to the U.S. Bureau of the Census, in 1983 that portion of the state's eating and drinking places industry (SIC 581) which paid Social Security (FICA) taxes consisted of 13,290 establishments, employed 180,817 persons, and disbursed an annual payroll of \$1.1 billion (Table 9-1).

During each of the years 1974 through 1983, the majority (57%-68%) of the establishments in this portion of the industry were relatively small operations employing less than ten persons (Table 9-1). However, establishments with larger staffs have provided most of the employment and payroll in this portion of the industry. During each of the years 1974 through 1983, establishments with staffs of 20-99 persons employed most (52%-66%) of the employees and disbursed most (51%-62%) of the payroll in this portion of the industry (Tables 9-2 and 9-3).

According to the Michigan Employment Security Commission, the annual average number of jobs in Michigan's eating and drinking places industry (SIC 581) increased steadily from 1974 through 1979, then fell through 1982, and then climbed again through 1984 (Table 19-5, page 245).¹ This pattern, which also occurred in Michigan's lodging industry (Table 19-6), seems to reflect the recent recession and recovery. Employment in the state's eating and drinking places exhibits some seasonal fluctuations, but these fluctuations are not as dramatic and regular as in the commercial lodging industry, presumably because summer tourists comprise a less significant portion of the eating and drinking places industry's market. During the period 1974-1984 relatively modest peaks in the number of jobs in Michigan's eating and drinking places have occurred in June, August, or September (Table 19-5, page 245).

Many restaurants in the state serve specialties which season the travel experiences of visitors with a distinctly Michiganian flavor. In particular, Stern and Stern (1983) identified nine restaurants which in their judgment served "the best indigenous specialties" in Michigan and expressed "the culinary souls" of their respective regions:

1. The Cherry Hut, Beulah (Cherry floats, sundaes, and pies).
2. The Dearborn Inn, Dearborn ("Midwestern man food," planked steak and Lake trout).
3. Everett's Smoked Fish, Naubinway (Smoked salmon and menominee).

¹These data differ somewhat from the data on number of employees in Table 9-1 because: (1) the latter records the number of employees in the industry during a specific one-week period, whereas Table 19-5 records the average number of jobs during specific one-month periods, (2) data in Table 9-1 for 1974-1982 only reflect the number of employees in firms that were active as of December 15 of a given year, and (3) data in Table 9-1 cover only establishments which paid Social Security (FICA) taxes.

4. Great Lakes Whitefish & Chips, Charlevoix (Whitefish and walleye).
5. Juilleret's, Harbor Springs (Planked whitefish).
6. Finlandia Restaurant, Marquette (Pasties).
7. Lawry's Pasty Shop, Ishpeming (Pasties).
8. London Chop House, Detroit (Perch and lamb).
9. Mattie's Bar-B-Que, Detroit (Soul food and ribs).

References

- Borsenik, Frank D. 1977. Maintenance and Engineering for Lodging and Foodservice Facilities. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Cichy, Ronald F. 1984. Sanitation Management: Strategies for Success. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Educational Institute of the American Hotel and Motel Association. n.d. Profit Motivation: The Key to Waiter/Waitress Training. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Gisslen, Wayne. 1983. Professional Cooking. New York: John Wiley & Sons.
- Lattin, Gerald W. 1985. The Lodging and Food Service Industry. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Ninemeier, Jack D. 1982. Planning and Control for Food and Beverage Operations. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Ninemeier, Jack D. 1984. Principles of Food and Beverage Operations. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- "Profitable Restaurant Operations." Lodging Reprint No. 29. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Rey, Anthony M. and Ferdinand Wieland. 1985. Managing Service in Food and Beverage Operations. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Stern, Jane and Michael Stern. 1983. Goodfood: The Adventurous Eater's Guide to Restaurants Serving America's Best Regional Specialties. New York: Alfred A. Knopf, Inc.
- Winters, Marjorie and Duke Winters. 1980. Adventurous Eating in Michigan: 101 Special Restaurants and Recipes. Holt, MI: Beech Tree Press.

Table 9-1. Selected characteristics of eating and drinking places in Michigan (SIC 581), 1974-1983.

Year	Number Employees for week including March 12	Annual Payroll (\$000)	Number of establish- ments	Percentage of establishments employing . . .								
				1-4 persons	5-9 persons	10-19 persons	20-49 persons	50-99 persons	100-249 persons	250-499 persons	500-999 persons	1000+ persons
1974	141,414	459,196	10,930	48.7	18.8	15.4	12.7	3.7	0.60	0.07	0.0	0.0
1975	132,849	514,668	10,997	49.7	18.4	14.9	13.1	3.5	0.40	0.05	0.0	0.0
1976	145,409	581,958	11,081	48.3	17.5	15.9	13.9	3.8	0.50	0.08	0.0	0.0
1977	158,606	664,561	11,542	46.1	17.3	16.5	14.9	4.8	0.40	0.03	0.0	0.0
1978	179,475	761,066	11,308	41.9	17.4	16.7	17.2	5.9	0.70	0.07	0.0	0.0
1979	185,122	841,272	11,271	41.7	17.1	16.6	17.1	6.9	0.50	0.05	0.0	0.0
1980	187,100	897,649	11,070	40.2	17.1	17.3	17.6	7.1	0.70	0.04	0.0	0.0
1981	179,171	921,275	11,138	40.6	17.9	16.8	18.0	6.0	0.60	0.04	0.0	0.0
1982	177,332	952,804	11,362	39.4	17.8	17.9	18.8	5.5	0.50	0.03	0.0	0.0
1983	180,817	1,068,118	13,290	42.9	17.7	17.2	16.7	5.1	0.40	0.02	0.0	0.0

NOTE: Prior to 1983, establishment counts were based on a determination of active status as of December 15 of a given year. Beginning with 1983, establishment counts were based on a determination of active status as of anytime during the year. All data in this table cover only establishments which paid Social Security (FICA) taxes.

SOURCE: U.S. Dept. of Commerce, Bureau of the Census. County Business Patterns: Michigan, annual, Table 18.

Table 9-2. Distribution of employees of eating and drinking places in Michigan (SIC 581) by size of firm, 1974-1983.

Year	Total number of employees for week including March 12	Percentage of employees working in establishments employing . . .								
		1-4 persons	5-9 persons	10-19 persons	20-49 persons	50-99 persons	100-249 persons	250-499 persons	500-999 persons	1000+ persons
1974	141,414	7.5	11.2	17.7	32.2	19.7	6.0	(D)	(D)	(D)
1975	132,849	8.3	11.5	18.4	36.1	19.3	5.2	1.30	0.00	0.00
1976	145,409	7.6	10.6	18.5	36.2	19.9	4.8	(D)	(D)	0.00
1977	158,606	6.6	9.80	18.3	36.9	23.3	3.7	(D)	(D)	0.00
1978	179,475	5.4	8.70	16.0	36.9	25.3	6.1	1.50	0.00	0.00
1979	185,122	5.0	8.30	15.4	36.5	29.3	4.3	1.10	0.00	0.00
1980	187,100	4.9	8.00	15.5	35.7	29.2	5.8	0.90	0.00	0.00
1981	179,171	5.1	8.80	15.8	38.5	26.1	4.7	1.10	0.00	0.00
1982	177,332	5.2	8.70	16.9	40.9	23.4	4.2	0.70	0.00	0.00
1983	180,817	5.1	8.80	17.4	39.7	24.1	4.3	0.50	0.00	0.00

NOTE: (D) denotes figures withheld to avoid disclosure of operations of individual establishments. Prior to 1983, establishment counts were based on a determination of active status as of December 15 of a given year. Beginning with 1983, establishment counts were based on a determination of active status as of anytime during the year. All data in this table cover only establishments which paid Social Security (FICA) taxes.

SOURCE: U.S. Department of Commerce, Bureau of the Census. County Business Patterns: Michigan, annual, Table 1B (1974) and Table 1C (1975-'83).

Table 9-3. Distribution of statewide payroll of Michigan's eating and drinking places (SIC 581) by size of firm, 1974-1983.

		Percentage of statewide payroll paid by establishments employing. . .								
Year	Total Annual Payroll (\$000)	1-4 Persons	5-9 Persons	10-19 Persons	20-49 Persons	50-99 Persons	100-249 Persons	250-499 Persons	500-999 Persons	1000+ Persons
1974	459,196	13.9	9.9	16.3	32.1	19.4	6.7	(D)	(D)	(D)
1975	514,668	13.2	11.8	16.3	33.6	18.2	5.6	1.3	0.0	0.0
1976	581,958	12.9	9.0	16.8	34.5	19.1	5.3	(D)	(D)	0.00
1977	664,561	12.1	8.3	16.7	34.3	22.8	4.4	(D)	(D)	0.00
1978	761,066	10.3	7.6	14.7	35.8	24.1	5.9	1.6	0.00	0.00
1979	841,272	10.6	7.9	14.4	34.5	26.6	4.7	1.4	0.00	0.00
1980	897,649	11.4	7.3	14.7	33.8	25.8	6.0	1.1	0.00	0.00
1981	921,275	9.4	8.2	15.1	37.1	23.6	5.1	1.5	0.00	0.00
1982	952,804	9.3	8.0	16.1	38.6	22.2	4.5	1.2	0.00	0.00
1983	1,068,118	8.6	7.5	16.3	38.1	24.1	4.4	0.9	0.00	0.00

NOTE: (D) denotes figures withheld to avoid disclosure of operations of individual establishments. Prior to 1983, establishment counts were based on a determination of active status as of December 15 of a given year. Beginning with 1983, establishment counts were based on a determination of active status as of anytime during the year. All data in this table cover only establishments which paid Social Security (FICA) taxes.

SOURCE: U.S. Dept. of Commerce, Bureau of the Census. County Business Patterns: Michigan, annual, Table 18 (1974) and Table 1C (1975-1983).

CHAPTER 10

SECOND HOMES AND OTHER TEMPORARY RESIDENCES IN MICHIGAN

Daniel M. Spotts

Introduction

Much of the recreation and travel that takes place in Michigan involves the use of some kind of temporary residence such as a second home or a rented cabin, cottage, or condominium. Stynes and Safronoff (1982:52), for example, found that 24% of Michigan's registered boats were stored at a second home, that 30% of the state's registered boat owners also owned a second home, and that 80% of the out-of-state boats registered in Michigan were owned by individuals with second homes.

Despite their importance, the total number of temporary residences in Michigan, and variations in this number over space and time have not been documented. Several studies have dealt wholly or partially with second homes in Michigan as one type of temporary residence (e.g., Fletcher, 1978; Gartner, 1981; Marans and Wellman, 1976), but none of them documented the growth and spatial distribution of these dwelling units. The purpose of this chapter is to shed some light on this phenomenon by documenting the number of such units in Michigan versus other states, by describing the spatial distribution of these units in Michigan, and by discussing growth in the numbers of these units both in Michigan and in other states.

Definitional Difficulties

Ideally one should study the second homes that people own, and the cabins, cottages, and condominiums that people rent, as two distinct phenomena. Unfortunately, the only comprehensive data on temporary residences of any kind -- the U.S. Census of Housing -- includes both types of housing units in the same census category labelled "vacant seasonal and migratory." The Census Bureau defines "vacant seasonal and migratory" units as vacant units held for migratory farm laborers during the crop season, and vacant units "intended for occupancy during only certain seasons of the year," including units "intended for recreational use, such as beach cottages and hunting cabins; units offered to vacationers in the summer for summer sports or in the winter for winter sports; and vacant units held for herders and loggers." (U.S. Bureau of the Census, 1983:B-3).¹ The numerous cabins, cottages, and condominiums for rent in Michigan are included in this category. Hotels, motels, and dwellings with communal dining facilities are not included.

The only other category in the Census that contains appropriate data includes units classified as "vacant year-round--held for occasional use." These are "vacant year-round units which are held for weekend or other occasional use throughout the year," including shared-ownership or time-sharing condominiums (U.S. Bureau of the Census, 1983:B-3). Units located in urban areas and units not used for recreational purposes are included in

¹The Census Bureau classifies a housing unit as vacant if no one is living in it at the time of enumeration, or if all persons staying in the unit at the time of enumeration have their usual place of residence elsewhere (U.S. Bureau of the Census, 1983:B-3).

this category. This category by itself does not provide a sufficiently comprehensive measure of temporary residences since it excludes strictly seasonal housing units such as hunting cabins, ski lodges, and beach cottages. The "vacant seasonal and migratory" category alone is likewise an inadequate measure of temporary residences since it does not include housing units such as a condominium in Charlevoix used year-round for recreation on weekends. The Census Bureau itself states that second homes may fall into either category (U.S. Bureau of the Census, 1983:B-3).

Since "vacant seasonal and migratory" units and units classified as "vacant year-round--held for occasional use" are each by themselves inadequate measures of temporary residences, the most reasonable way to enumerate these housing units seems to be to add together the data in the two categories. This was the approach used in this study. The sum of the data in the two categories represents second homes in either rural or urban areas used for either recreational or nonrecreational purposes, rented cabins, cottages, and condominiums, and units held for loggers, herders, and migratory farm workers. Because more than owned second homes in the traditional sense of the term are included in this measure, the more comprehensive term "temporary residence" is used as a descriptor of the above types of housing units. "Temporary residences" as thus defined certainly include a diverse array of housing units, but all such housing units nevertheless have the common denominator of being a home away from home that is associated with some people's travel experiences. Indeed, units located in urban areas, although inconsistent with some individuals' conception of a second home, may generate a significant amount of travel, particularly in sunbelt states. In general, the disadvantage of ambiguity in the definition is counterbalanced to some extent by the advantage of comprehensiveness. Furthermore, units held for loggers, herders, and migratory farm workers are so few in number that their inclusion in the data is inconsequential. In 1970 there were only 54,122 such units in the U.S., or only 3.0% of the temporary residences in the U.S.²

Temporary Residences in Michigan Versus Other States

Table 10-1 shows the number of temporary residences in each state in 1960, 1970, and 1980. In 1980 Michigan had 215,958 temporary residences, or 6.0% of the total housing units in the state. Michigan had more temporary residences in 1980 than any other state except Florida. In general, the states with the most temporary residences, including Michigan, are heavily populated states that have abundant recreation resources. States with large populations but less abundant recreation resources, such as Ohio and Illinois, have comparatively fewer temporary residences. Between 1960 and 1980 the number of temporary residences in Michigan grew 26%. Most of this growth was during the 1970's. Wisconsin experienced a higher rate of growth between 1960 and 1980, Minnesota experienced an equivalent rate of growth, and Ohio, Indiana, and Illinois experienced little or no growth. Southern and western states, particularly Florida, Arizona, Alaska, and Nevada, experienced far higher growth rates than Michigan during these two decades. In fact, Michigan's growth rate of 26% for the period 1960-1980 was actually lower than the overall U.S. growth rate of 38%. In absolute numbers, however, the number of temporary residences added in Michigan between 1960 and 1980 (45,026) was only slightly less than the number added in Arizona (49,175) during this period. On

²Source: U.S. Bureau of the Census. "1970 Census of Housing, Second Count, Table 29." An analogous figure for 1980 is not available.

Table 10-1. Number of temporary residences by state: 1960, 1970, and 1980.

STATE	NUMBER OF TEMPORARY RESIDENCES				PERCENT CHANGE		
	1980 RANK	April 1960	April 1970	April 1980	1960-1970	1970-1980	1960-1980
Florida	1	73,926	84,205	304,607	13.9	261.7	312.0
■ MICHIGAN	2	170,932	177,879	215,958	4.1	21.4	26.3
New York	3	247,977	204,586	215,920	-17.5	5.5	-12.9
California	4	128,870	128,738	181,620	-0.1	41.1	40.9
Texas	5	107,159	112,481	154,974	5.0	37.8	44.6
Wisconsin	6	88,130	71,380	140,401	-19.0	96.7	59.3
Pennsylvania	7	85,116	82,707	125,052	-2.8	51.2	46.9
New Jersey	8	122,152	106,892	105,825	-12.5	-1.0	-13.4
Minnesota	9	77,627	64,458	97,753	-17.0	51.7	25.9
North Carolina	10	36,583	36,491	84,233	-0.3	130.8	130.3
Massachusetts	11	87,019	65,813	81,955	-24.4	24.5	-5.8
Maine	12	64,718	66,648	79,876	3.0	19.8	23.4
Arizona	13	17,323	14,723	66,498	-15.0	351.7	283.9
Washington	14	42,372	29,257	56,304	-31.0	92.4	32.9
Missouri	15	37,125	20,296	53,371	-45.3	163.0	43.8
Colorado	16	28,690	22,258	48,116	-22.4	116.2	67.7
New Hampshire	17	33,882	36,991	45,884	9.2	24.0	35.4
Ohio	18	41,790	38,440	45,195	-8.0	17.6	8.1
South Carolina	19	21,189	19,063	43,992	-10.0	130.8	107.6
Indiana	20	39,780	36,090	41,727	-9.3	15.6	4.9
Virginia	21	23,770	27,835	39,589	17.1	42.2	66.6
Vermont	22	18,171	18,464	34,279	1.6	85.7	88.6
Maryland	23	24,996	22,642	34,269	-9.4	51.4	37.1
Illinois	24	37,424	31,623	31,610	-15.5	0.0	-15.5
Georgia	25	23,337	16,443	31,025	-29.5	88.7	32.9
Alabama	26	21,680	18,883	30,283	-12.9	60.4	39.7
Oregon	27	23,612	15,672	30,237	-33.6	92.9	28.1
Louisiana	28	22,114	13,586	29,750	-38.6	119.3	34.5
New Mexico	29	10,110	8,518	24,069	-15.7	182.6	138.1
Idaho	30	14,837	9,636	22,737	-35.1	136.0	53.2
Kentucky	31	17,087	19,845	22,288	16.1	12.3	30.4
Tennessee	32	17,073	12,743	21,676	-25.4	70.1	27.0
Arkansas	33	22,309	10,963	20,965	-50.9	91.2	-6.0
Connecticut	34	31,550	19,705	20,696	-37.5	5.0	-34.4
Oklahoma	35	18,670	9,517	20,265	-49.0	112.9	8.5
Mississippi	36	18,243	10,940	20,036	-40.0	83.1	9.8
Montana	37	14,091	9,705	19,046	-31.1	96.2	35.2
West Virginia	38	13,909	11,980	18,923	-13.9	58.0	36.0
Delaware	39	6,429	6,763	16,243	5.2	140.2	152.7
Iowa	40	18,129	13,086	15,803	-27.8	20.8	-12.8
Utah	41	5,518	5,237	12,602	-5.1	140.6	128.4
Rhode Island	42	14,521	11,663	12,057	-19.7	3.4	-17.0
Alaska	43	4,157	4,858	11,996	16.9	146.9	188.6
South Dakota	44	8,102	5,915	10,706	-27.0	81.0	32.1
Nebraska	45	10,003	5,957	10,623	-40.4	78.3	6.2
Kansas	46	12,100	5,862	10,272	-51.6	75.2	-15.1
North Dakota	47	7,395	5,966	9,353	-19.3	56.8	26.5
Wyoming	48	6,545	3,450	8,567	-47.3	148.3	30.9
Nevada	49	2,573	2,659	7,494	3.2	181.8	190.9
Hawaii	50	2,960	2,137	6,431	-27.8	200.9	117.3
District of Columbia	51	610	1,052	903	72.5	-14.2	48.0
TOTAL		2,024,391	1,782,683	2,794,054	-11.9	56.7	38.0

NOTE: Number of temporary residences was calculated by combining the Census of Housing categories, "Vacant seasonal and migratory" and "Vacant year-round--held for occasional use."

SOURCES: U.S. Department of Commerce, Bureau of the Census: (1) U.S. Census of Housing, 1960, Volume I, States and Small Areas, Part 1, United States Summary. Washington, D.C.: U.S. Government Printing Office, 1963, Table 3. (2) U.S. Census of Housing, 1970, General Housing Characteristics, Final Report HC(1)-A1, United States Summary. Washington, D.C.: U.S. Government Printing Office, 1971, Table 3. (3) U.S. Census of Housing, 1980, Volume 1, Characteristics of Housing Units, Chapter A, General Housing Characteristics, Part 1, United States Summary, HC80-1-A1. Washington, D.C.: U.S. Government Printing Office, 1983, Table 71.

the other hand, the number of owned units versus rental units added in the two states may have been quite different.

Temporary Residences in Michigan's Counties

Current Quantity and Past Growth

Table 10-2 shows the number of temporary residences in each of Michigan's counties in 1960 and 1980. Figures 10-1, 10-2, and 10-3 are based on selected data from this table. Figure 10-1 shows that certain inland counties had the most temporary residences in 1980. Roscommon County led the state in number of temporary residences, followed by Clare and Lake Counties. These three counties also experienced the largest increase in absolute numbers of temporary residences between 1960 and 1980. Each of these counties added more than 3,800 of these units during this period. The large number of temporary residences in Roscommon County is probably related to its accessibility to urban areas via I-75 and U.S. 23, and the presence of two large inland lakes -- Higgins Lake and Houghton Lake. Other counties with numerous temporary residences include Berrien, Newaygo, Gladwin, and a cluster of counties in northeast lower Michigan. The Upper Peninsula had only 30,315 temporary residences in 1980, or only 14% of the total number in the state.

The counties that experienced the highest growth in number of temporary residences between 1960 and 1980 on a percentage basis were also inland counties. During this period the number of temporary residences in Crawford and Oscoda counties more than tripled. Other counties that experienced high growth rates include Menominee, Schoolcraft, Missaukee, Lake, Osceola, and Clare. Inland counties may have experienced greater growth than coastal counties in both absolute numbers and on a percentage basis because coastal property may have been largely "locked up" by 1960.

Temporary Residences as a Proportion of Total Housing Units

Figure 10-3 shows the proportion of all housing units in a given county that were temporary residences in 1980. Temporary residences constituted 1/6 or more of the total housing units in a given county only in northern Michigan, i.e., north of the demarcation between the largely agricultural land of southern Michigan and the generally forested land of Michigan's north country. Temporary residences constituted over half of the total housing units in Lake, Oscoda, Roscommon, Montmorency, Alcona, and Keweenaw counties, a higher proportion than in any other counties of the state. These counties were capable of housing large numbers of temporary residents vis-a-vis the size of their resident populations. Within northern Michigan, the relatively more populated counties of Marquette, Menominee, Delta, Alpena, Grand Traverse, and Wexford were among the counties with the lowest proportions of temporary residences.

Since temporary residences constitute 6% of the total housing units in Michigan, any county in which the proportion of temporary residences exceeds 6% has a greater than expected proportion of temporary residences and vice versa. The proportion of temporary residences in a given county can be mathematically compared with this 6% benchmark by simply dividing this proportion by 6% (0.06). The resulting ratios, called "location quotients," are shown in Table 10-2. Counties with location quotients greater than 1.0 have a proportion of temporary residences that exceeds the expected value of 0.06; counties with location quotients less than 1.0 have a proportion of temporary residences lower than this expected value. The counties with the highest location quotients are of

Table 10-2. Number of temporary residences by Michigan county, 1960 and 1980.

COUNTY	1980 RANK	NUMBER OF TEMP- ORARY RESIDENCES ¹		NET CHANGE 1960-1980	PERCENT CHANGE 1960-1980	1980 PERCENTAGE OF TOTAL HOUSING UNITS IN COUNTY	1980 LOCATION QUOTIENT
		April 1960	April 1980				
Roscommon	1	5,366	10,696	5,330	99.3	59.7	9.92
Clare	2	4,163	9,044	4,881	117.2	48.8	8.11
Lake	3	3,191	7,040	3,849	120.6	66.9	11.13
Iosco	4	3,679	6,106	2,427	66.0	33.9	5.64
Gladwin	5	3,163	5,849	2,686	84.9	43.3	7.20
Newaygo	6	2,988	5,282	2,294	76.8	28.9	4.80
Alcona	7	2,773	4,995	2,222	80.1	53.3	8.86
Berrien	8	7,013	4,674	-2,339	-33.4	6.8	1.13
Oscoda	9	1,479	4,515	3,036	205.3	61.8	10.27
Cheboygan	10	2,997	4,480	1,483	49.5	35.9	5.96
Montmorency	11	2,987	4,354	1,367	45.8	55.2	9.18
Chippewa	12	2,574	4,298	1,724	67.0	26.2	4.35
Antrim	13	3,122	4,231	1,109	35.5	39.2	6.52
Huron	14	3,261	4,092	831	25.5	22.9	3.81
Van Buren	15	6,501	4,023	-2,478	-38.1	14.0	2.32
Marquette	16	2,026	3,939	1,913	94.4	12.9	2.14
Otsego	17	1,947	3,737	1,790	91.9	41.2	6.84
Mecosta	18	1,863	3,619	1,756	94.3	23.3	3.88
Sanilac	19	3,236	3,591	355	11.0	19.4	3.23
Mackinac	20	2,938	3,476	538	18.3	45.6	7.58
Leelanau	21	2,660	3,475	815	30.6	38.3	6.37
Emmet	22	2,731	3,466	735	26.9	27.7	4.61
Oceana	23	2,337	3,431	1,094	46.8	30.1	5.01
Cass	24	3,263	3,384	121	3.7	15.7	2.61
Allegan	25	3,333	3,371	38	1.1	10.6	1.76
Kalkaska	26	2,152	3,332	1,180	54.8	43.9	7.29
Charlevoix	27	2,332	3,296	964	41.3	29.6	4.93
Montcalm	28	2,532	3,145	613	24.2	15.1	2.50
Benzie	29	2,412	3,093	681	28.2	41.2	6.85
Crawford	30	850	3,078	2,228	262.1	41.1	6.83
Manistee	31	2,258	3,035	777	34.4	24.8	4.12
Grand Traverse	32	3,177	2,990	-187	-5.9	12.7	2.10
Branch	33	1,776	2,984	1,208	68.0	16.6	2.76
Presque Isle	34	1,723	2,898	1,175	68.2	34.7	5.76
Mason	35	2,116	2,815	699	33.0	21.3	3.54
Barry	36	2,689	2,796	107	4.0	14.6	2.43
Osceola	37	1,000	2,764	1,764	176.4	27.8	4.63
Oakland	38	6,130	2,612	-3,518	-57.4	0.7	0.12
Houghton	39	1,719	2,441	722	42.0	14.8	2.46
Jackson	40	2,169	2,432	263	12.1	4.4	0.73
Missaukee	41	955	2,421	1,466	153.5	39.6	6.58
Wayne	42	2,005	2,401	396	19.8	0.3	0.05
Delta	43	1,408	2,323	915	65.0	13.7	2.28
St. Clair	44	4,019	2,295	-1,724	-42.9	4.4	0.74
Lenawee	45	2,359	2,239	-120	-5.1	6.6	1.10

Kent	46	2,185	2,187	2	0.1	1.3	0.22
Livingston	47	4,297	2,147	-2,150	-50.0	6.1	1.02
Ogemaw	48	2,690	2,131	-559	-20.8	16.4	2.73
Alpena	49	1,253	1,966	713	56.9	14.1	2.34
Gogebic	50	972	1,909	937	96.4	18.9	3.14
Wexford	51	1,057	1,861	804	76.1	16.1	2.67
Hillsdale	52	1,126	1,824	698	62.0	10.7	1.77
Arenac	53	1,375	1,802	427	31.1	23.4	3.89
Iron	54	1,319	1,692	373	28.3	21.9	3.63
Ottawa	55	2,165	1,629	-536	-24.8	3.0	0.50
Schoolcraft	56	798	1,605	807	101.1	32.3	5.36
Menominee	57	598	1,558	960	160.5	13.5	2.24
St. Joseph	58	1,800	1,509	-291	-16.2	6.7	1.12
Alger	59	814	1,403	589	72.4	27.7	4.60
Luce	60	1,076	1,202	126	11.7	33.6	5.59
Keweenaw	61	1,046	1,174	128	12.2	54.6	9.08
Ontonagon	62	723	1,155	432	59.8	22.9	3.81
Muskegon	63	1,700	1,146	-554	-32.6	2.0	0.33
Isabella	64	594	1,139	545	91.8	6.3	1.04
Dickenson	65	766	1,137	371	48.4	10.1	1.68
Washtenaw	66	1,529	1,023	-506	-33.1	1.0	0.17
Baraga	67	714	1,003	289	40.5	23.5	3.90
Lapeer	68	1,226	850	-376	-30.7	3.7	0.61
Tuscola	69	920	846	-74	-8.0	4.2	0.70
Kalamazoo	70	1,209	730	-479	-39.6	0.9	0.15
Genesee	71	1,406	729	-677	-48.2	0.4	0.07
Midland	72	587	632	45	7.7	2.4	0.40
Ionia	73	762	606	-156	-20.5	3.4	0.57
Calhoun	74	676	458	-218	-32.2	0.8	0.14
Monroe	75	1,907	443	-1,464	-76.8	1.0	0.16
Bay	76	1,100	437	-663	-60.3	1.0	0.17
Macomb	77	967	398	-569	-58.8	0.2	0.03
Ingham	78	314	311	-3	-1.0	0.3	0.05
Saginaw	79	456	227	-229	-50.2	0.3	0.05
Eaton	80	581	173	-408	-70.2	0.5	0.09
Gratiot	81	312	155	-157	-50.3	1.1	0.18
Shiawassee	82	274	116	-158	-57.7	0.5	0.08
Clinton	83	266	87	-179	-67.3	0.5	0.08
MICHIGAN		170,932	215,958	45,026	26.3	6.0	1.00

¹Comparable data for 1970 are not available for each county in the state. Number of temporary residences was calculated by combining the Census of Housing categories "Vacant seasonal and migratory" and "Vacant year-round -- held for occasional use."

SOURCES: U.S. Department of Commerce, Bureau of the Census: (1) U.S. Census Housing, 1960, Volume 1, States and Small Areas, Part 5, Michigan - New Hampshire. Washington, D.C.: U.S. Government Printing Office, 1963, Tables 12 and 28. (2) U.S. Census of Housing, 1980, Volume 1, Characteristics of Housing Units, Chapter A, General Housing Characteristics, Part 24, Michigan, HC80-1-A24. Washington, D.C.: U.S. Government Printing Office, 1982, Table 46. (3) U.S. Census Housing, 1980, Volume 1, Characteristics of Housing Units, Chapter A, General Housing Characteristics, Part 1, United States Summary, HC80-1-A1. Washington, D.C.: U.S. Government Printing Office, 1983, Table 71.

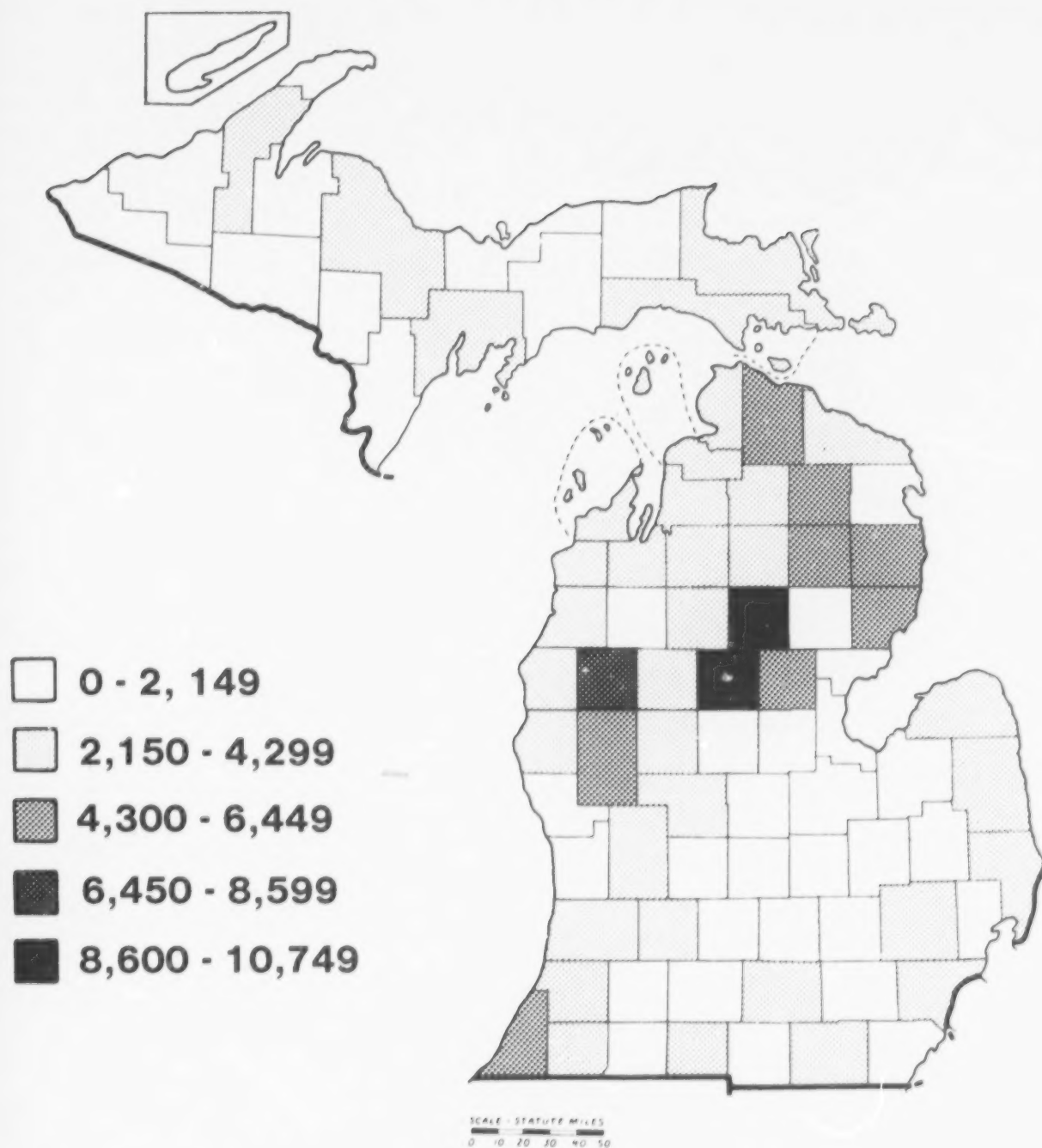


Figure 10-1. Number of temporary residences in 1980 by Michigan county.

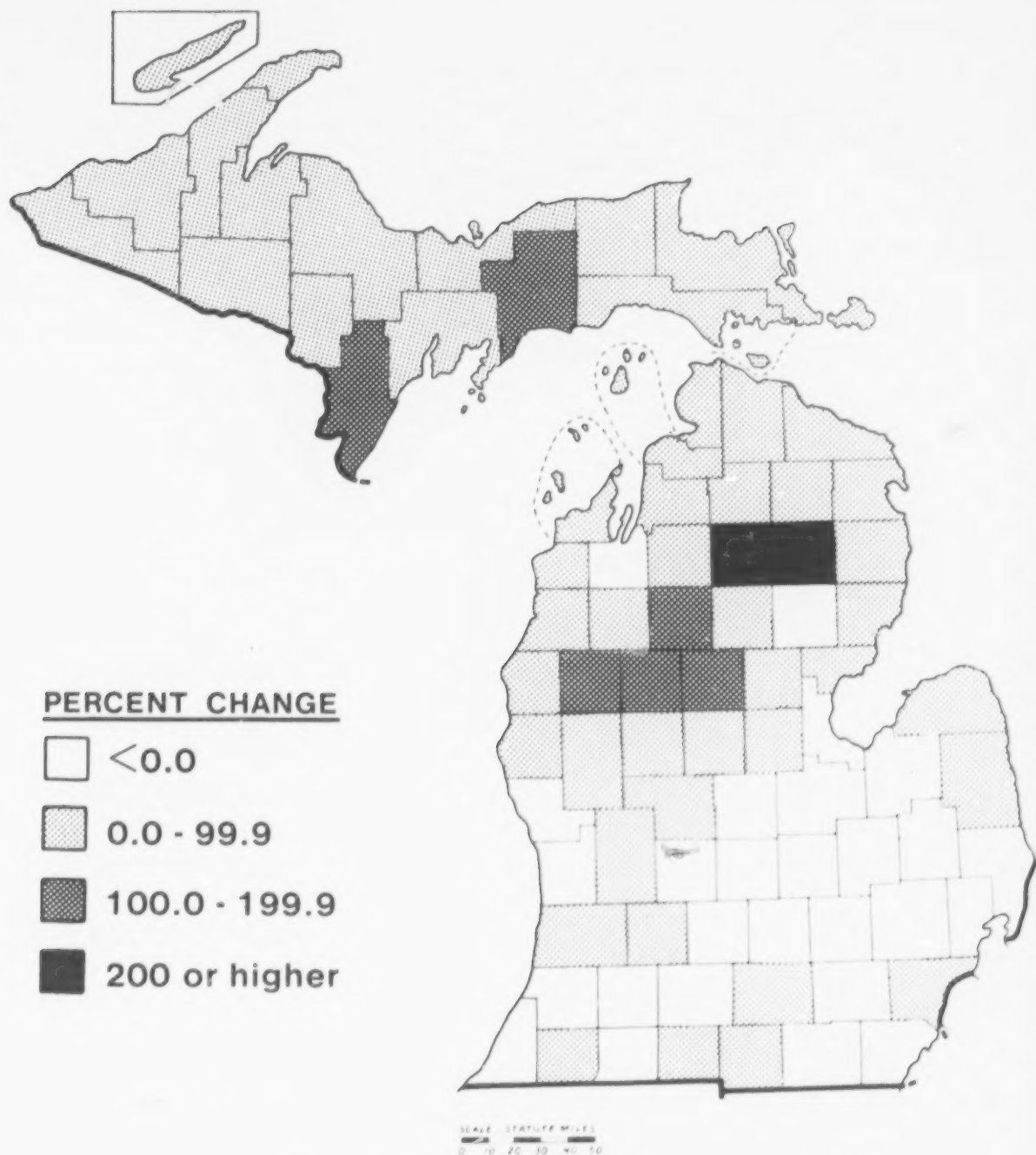


Figure 10-2. Percent change in number of temporary residences by Michigan county, 1960-1980.

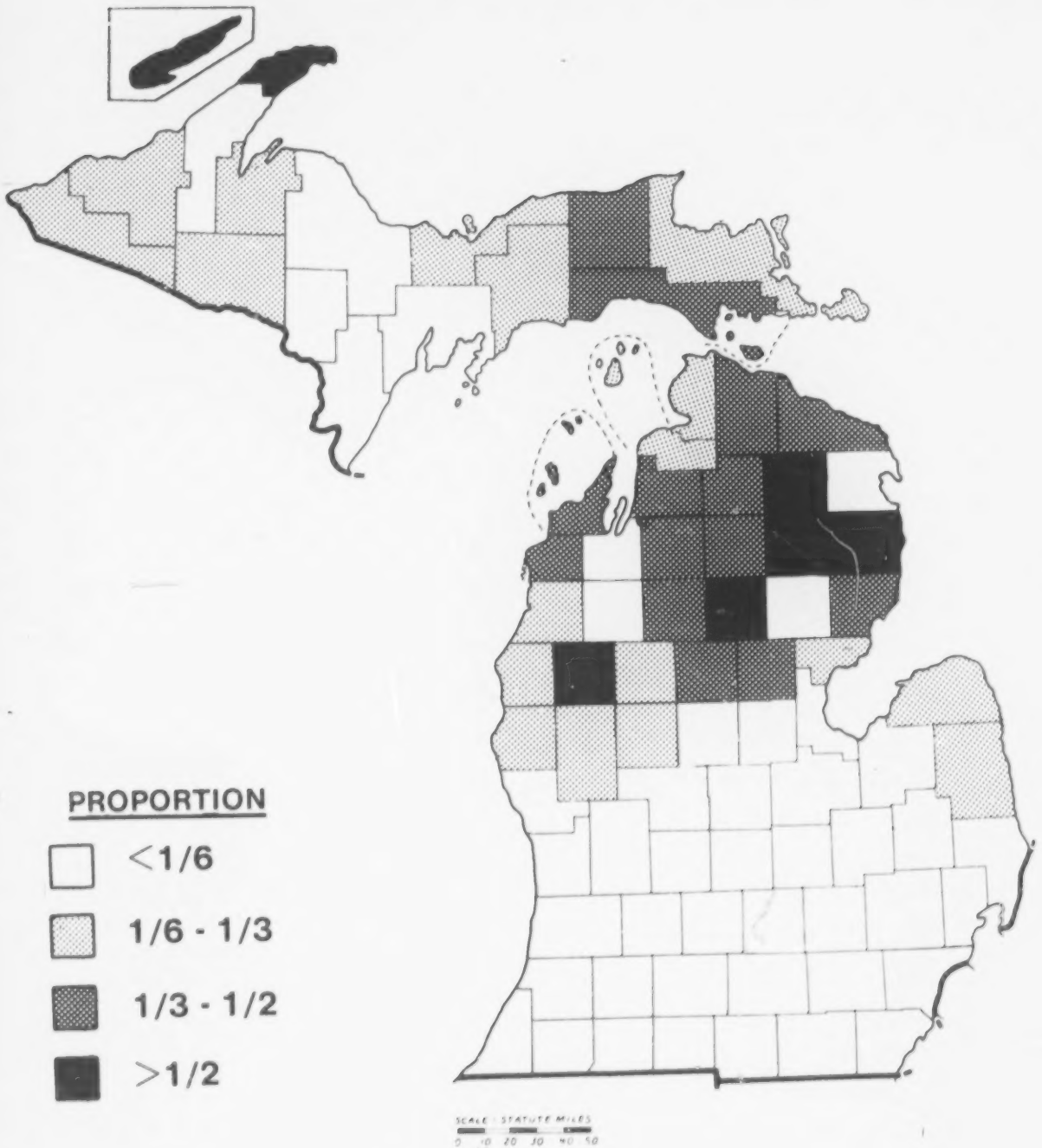


Figure 10-3. Proportion of total housing units in Michigan counties that are temporary residences, 1980.

course the same counties with the highest proportions of temporary residences. This is because dividing the county proportions by a constant (0.06) converts these proportions to a different scale but does not affect their relative standings.

Conclusions

This chapter presents only a rudimentary description of the temporary residence situation in Michigan. The vast number of such units in Michigan vis-a-vis other states warrants further research into this phenomenon. A host of questions remain to be answered by such inquiry. For example, what proportion of the tourists that travel in Michigan are seasonal residents of this state? What is the economic impact of seasonal residency in Michigan? What proportion of those using temporary residences are retirees versus families? What proportion of them are from out-of-state? Can the large number of temporary residences in Michigan be exploited for marketing purposes, and if so, how? What proportion of the temporary residences in Michigan are owned second homes versus rented cabins, cottages, or condominiums? The latter question could be most readily answered if the Census Bureau would publish more detailed breakdowns of the dwellings it classifies as "vacant." Since the study of second homes and related housing units is an important use of Census data on such dwellings, and possibly the principal use of these data, it makes sense to publish them in greater detail.

References

- American Society of Planning Officials. 1976. Subdividing Rural America: Impacts of Recreational Lot and Second Home Development. Report prepared for the Council on Environmental Quality, the U.S. Dept. of Housing and Urban Development, and the Appalachian Regional Commission. Washington, D.C.: U.S. Government Printing Office.
- Fletcher, James Edward. 1978. "A Systematic Approach to the Analysis of Land Sales Regulatory Programs: A Case Study of the Michigan Land Sales Act of 1972." Unpublished Ph.D. dissertation, Michigan State University. East Lansing.
- Gartner, William C. 1981. "A Study of Owner Characteristics, Home Development, and Land Value Determinants in Selected Areas of Michigan's Northern Lower Peninsula." Unpublished Ph.D. dissertation, Dept. of Resource Development, Michigan State University. East Lansing.
- Marans, R.W., and J.D. Wellman. 1976. "Waterfront Living: A Report on Permanent and Seasonal Residents in Northern Michigan." Ann Arbor, MI: Institute for Social Science Research, University of Michigan.
- Payne, Brian R., Richard C. Gannon, and Lloyd C. Irland. 1975. The Second-Home Recreation Market in the Northeast. Problem analysis prepared for the Bureau of Outdoor Recreation by the U.S. Forest Service. Washington, D.C.: U.S. Government Printing Office.
- Ragatz, Richard Lee. 1969. Vacation Homes: An Analysis of the Market for Seasonal Recreational Housing. Department of Housing and Design, Cornell University, Ithaca, New York.

- Ragatz, Richard L. 1980. "Trends in the Market for Privately Owned Seasonal Recreational Housing." Proceedings 1980 National Outdoor Recreation Trends Symposium, Volume I. U.S.D.A. Forest Service General Technical Report NE-57. Broomall, PA: Northeastern Forest Experiment Station.
- Stynes, Daniel J. and David Safronoff. 1982. 1980 Michigan Recreational Boating Survey. Michigan Sea Grant Publication MICHU-SG-82-202. Ann Arbor, MI: Michigan Sea Grant Publications.
- U. S. Bureau of the Census. 1983. U.S. Census of Housing, 1980. Volume I, Characteristics of Housing Units, Chapter A. General Housing Characteristics, Part I, United States Summary, HC80-1-A1. Washington, D.C.: U.S. Government Printing Office.

CHAPTER 11

FEDERAL RECREATION RESOURCES IN MICHIGAN

Daniel M. Spotts

Introduction

Four federal agencies manage recreation resources in Michigan: the U.S. Forest Service, the National Park Service, the U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers. These agencies manage a total of more than 3.5 million acres of land in Michigan. The bulk of this acreage is wildland that contributes significantly to Michigan's mystique as a haven for hunters, anglers, and other outdoor recreation enthusiasts. Moreover, several important tourist attractions, such as Sleeping Bear Dunes National Lakeshore, Pictured Rocks National Lakeshore, and the Soo Locks, are included in these holdings. This chapter provides a basic description of these important areas by discussing their size and character and by documenting recent trends in the amount of public use they receive.

National Park Service Areas

The National Park Service administers three areas in Michigan: Isle Royale National Park, Pictured Rocks National Lakeshore, and Sleeping Bear Dunes National Lakeshore. Isle Royale National Park, an island in Lake Superior, is largely a wilderness area famed for its wolf and moose populations. Pictured Rocks National Lakeshore, located in the central Upper Peninsula, features sandstone cliffs that rise abruptly from Lake Superior, sand dunes, and waterfalls. Sleeping Bear Dunes National Lakeshore, located on northern Lake Michigan, features large sand dunes and off-shore islands.

Isle Royale National Park has a gross area of 571,790 acres, 94% of which is in federal ownership. Pictured Rocks National Lakeshore has a gross area of 72,899 acres, 48% of which is in federal ownership. Sleeping Bear Dunes has a gross area of 71,021 acres, 78% of which is in federal ownership (Table 11-1).

Table 11-1. Acreages of Michigan units of the National Park System as of December 31, 1984.

Type of Land	Isle Royale National Park	Pictured Rocks National Lakeshore	Sleeping Bear Dunes National Lakeshore
FEDERAL LAND IN ACRES			
Fee Ownership	539,281.87	35,357.43	54,173.28
Less than fee ownership	0.00	0.00	1,398.19
Sub-Total	539,281.87	35,375.43	55,571.47
NON-FEDERAL LAND IN ACRES			
Other Public	32,508.24	0.00	12,133.34
Private	0.00	37,523.43	3,316.33
Sub-Total	32,508.24	37,523.43	15,449.67
GROSS AREA IN ACRES (Grand Total)	571,790.11	72,898.86	71,021.14

SOURCE: U.S. Department of the Interior, National Park Service. "National Park Service Listing of Acreages, By Region," semi-annual.

Visitation to Isle Royale National Park declined steadily from 1980 through 1984. In 1984 there were only 11,800 recreation visits to this National Park, fewer than the number of recreation visits to any of the other 39 National Parks outside of Alaska (U.S. National Park Service, n.d.: 32-33). Visitation in 1985 was somewhat higher -- 12,951 recreation visits (Table 11-2).

Attendance at Pictured Rocks National Lakeshore grew steadily from 270,400 in 1979 to an all-time high of 441,300 in 1983, and then declined to 397,884 in 1985. Attendance at Sleeping Bear Dunes National Lakeshore has fluctuated since its opening in 1976. Its 1985 attendance of 897,512 was an all-time high and was 36% higher than its 1983 attendance of 658,200. The combined attendance at all three areas grew from 1982 through 1985. Combined attendance in 1985 was 1,308,347 recreation visits, an all-time high.

Sleeping Bear Dunes National Lakeshore had 75,778 overnight stays in 1985, more than either the 53,189 overnight stays at Isle Royale National Park or the 26,392 overnight stays at Pictured Rocks National Lakeshore (Table 11-3). The total number of overnight stays at Sleeping Bear Dunes climbed steadily from 1978 through 1981, and then declined steadily through 1984. Total overnight stays at Isle Royale declined steadily from 1977 through 1984, backcountry overnight stays declined steadily from 1981 through 1984, and overnight stays in concessioner-operated lodging declined steadily from 1982 through 1984. These declines generally parallel the steady decline in recreation visits to Isle Royale from 1980 through 1984. Both backcountry and total overnight stays at Pictured Rocks peaked in 1983 and then declined through 1985. In 1985 backcountry overnight stays constituted 61% of the total overnight stays at Isle Royale, 42% of the total overnight stays at Pictured Rocks, and 16% of the total overnight stays at Sleeping Bear Dunes.

National Forest Lands in Michigan

The U.S. Forest Service administers four National Forests and a variety of small special-purpose areas in Michigan (Table 11-4). Hiawatha and Ottawa National Forests are located in the Upper Peninsula; Huron and Manistee National Forests are located in the Lower Peninsula. The four National Forests have a total gross area of 4,867,299 acres, 57% of which is in federal ownership. Hiawatha National Forest has a gross area of 1,281,637 acres, 69% of which is in federal ownership; Ottawa National Forest has a gross area of 1,559,892 acres, 59% of which is in federal ownership. Huron National Forest has a gross area of 694,097 acres, 62% of which is in federal ownership; and Manistee National Forest has a gross area of 1,331,673 acres, 39% of which is in federal ownership. The Upper Peninsula contains nearly two-thirds (65%) of the federally-owned National Forest land in Michigan.

Overall participation in recreation activities in Michigan's National Forests declined from FY1982 through FY1984 (Table 11-5). In particular, participation in virtually all types of recreation activities except resort use was lower in FY1984 than in FY1983. Use of most dispersed recreation areas in the forests was also lower in FY1984 than in FY1983 (Table 11-6).

Declines in the amount of camping, picnicking, mechanized recreational travel, swimming/scuba diving, horseback riding, and use of visitor information services from FY1981 through FY1984 are particularly evident (Table 11-5). Declines in the use of campgrounds, picnic/playground/sports sites, and swim sites during this period seem to reflect these same trends (Table 11-7).

Table 11-2. Number of recreational visits to Michigan units of the National Park System, by year.

Year	Isle Royale National Park	Pictured Rocks National Lakeshore	Sleeping Bear Dunes National Lakeshore	Total for All Areas
1940	2,962			
1941	7,257			
1942	6,128			
1943	5,376			
1944	3,751			
1945	6,139			
1946	7,068			
1947	7,867			
1948	7,922			
1949	9,518			
1950	3,100			
1951	2,370			
1952	2,830			
1953	3,611			
1954	4,300			
1955	5,200			
1956	5,200			
1957	5,200			
1958	4,000			
1959	5,800			
1960	6,400			
1961	6,500			
1962	5,400			
1963	7,800			
1964	8,200			
1965	9,500			
1966	10,800			
1967	9,500			
1968	10,100			
1969	10,400			
1970	14,400			
1971	15,900			
1972	16,100			
1973	15,700	287,500		
1974	13,900	296,300		303,200
1975	16,800	277,300		310,200
1976	16,964	324,412		294,100
1977	16,676	296,734	696,673 ^a	1,038,049
1978	16,400	287,400	837,976	1,149,386
1979	14,800	270,400	759,100	1,062,900
1980	15,000	311,000	733,500	1,018,700
1981	14,600	329,800	689,300	1,015,300
1982	13,200	356,400	759,000	1,103,400
1983	12,900	441,300	664,900	1,034,500
1984	11,809	407,700	658,200	1,112,400
1985	12,951	397,884	853,200	1,272,700
			897,512	1,308,347

^aNine-month total, beginning with April.

NOTE: "Recreational visits" are entries of persons onto lands or waters administered by the National Park Service for recreation purposes. Does not include through traffic or visits by persons going to and from inholdings.

SOURCES: U.S. Department of the Interior, National Park Service. "Public Use of the National Parks: A Statistical Report" - individual reports for 1904-1940, 1941-1953, 1954-1964, 1960-1970, and 1971-1980.

U.S. Department of the Interior, National Park Service. "National Park Statistical Abstract," annual.

Table 11-3. Number of overnight stays in Michigan units of the National Park System, 1975-1985.

1972-1985								
<u>Concessioner-operated</u>			<u>National Park Service-operated</u>				Non-recreational Stays	Total
Year	Lodging	Campground	Tents	RVs	Back-country	Miscellaneous		
ISLE ROYALE NATIONAL PARK								
1975	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	63,800
1976	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	66,000
1977	8,544	0	23,969	0	22,615	17,444	0	72,572
1978	9,541	0	20,321	0	19,743	17,939	0	67,544
1979	9,657	333	27,140	0	21,144	5,736	630	64,640
1980	8,970	282	19,740	0	28,043	2,303	531	59,869
1981	9,564	505	6,870	0	37,853	1,842	429	57,063
1982	9,660	1,537	5,985	0	35,929	1,404	331	54,846
1983	8,294	1,219	6,665	0	35,221	1,084	322	52,805
1984	7,894	1,704	6,118	0	30,864	2,576	663	49,819
1985	9,319	1,415	6,433	0	32,262	2,751	1,009	53,189
PICTURED ROCKS NATIONAL LAKESHORE								
1975	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	19,900
1976	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	24,800
1977	0	0	7,064	6,870	7,477	172	152	21,735
1978	0	0	8,635	5,754	7,224	181	0	21,794
1979	0	0	8,096	5,187	8,854	538	0	22,675
1980	0	0	9,901	5,713	9,270	166	0	25,050
1981	0	0	8,332	5,211	8,938	0	0	22,481
1982	0	0	9,348	5,033	9,320	0	0	23,701
1983	0	0	9,105	4,549	14,007	0	0	27,661
1984	0	0	9,025	4,578	13,269	0	0	26,872
1985	0	0	9,648	5,616	11,128	0	0	26,392
SLEEPING BEAR DUNES NATIONAL LAKESHORE								
1975	---	---	---	---	---	---	---	---
1976	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	90,600 ^a
1977	0	0	38,014	39,248	7,666	2,418	0	87,346
1978	0	0	12,372	11,685	7,196	2,745	0	33,998
1979	0	0	22,713	23,412	6,803	3,006	0	55,934
1980	0	0	31,606	31,181	4,569	4,624	0	71,980
1981	0	0	32,367	38,062	7,466	3,863	0	81,758
1982	0	0	31,126	29,999	9,719	3,542	0	74,386
1983	0	0	28,549	28,161	8,724	2,536	0	67,970
1984	0	0	24,836	29,389	8,837	2,619	0	65,681
1985	0	0	33,735	25,645	12,155	4,243	0	75,778

^aNine-month total, beginning with April.

NOTE: An "overnight stay" is the passing of one night within a park by a visitor. An overnight stay occurs each night a visitor remains in the park.

SOURCE: U.S. Department of the Interior, National Park Service. n.d. "Public Use of the National Park System: Calendar Year Report 1976," "Statistical Abstract 1977," and "National Park Statistical Abstract," annual.

Table 11-4. Acreages of Michigan units of the National Forest System as of September 30, 1984.

Unit Name	Headquarters of Unit	National Forest System Lands (acres)	Other Lands Within Unit Boundaries (acres)	Gross Area Within Unit Boundaries (acres)
NATIONAL FORESTS				
Miawatha	Escanaba, MI	879,593	402,044	1,281,637
Huron	Cadillac, MI	428,669	265,428	694,097
Manistee	Cadillac, MI	522,167	809,506	1,331,673
Ottawa	Ironwood, MI	928,221	631,671	1,559,892
Sub-Total		2,758,650	2,108,649	4,867,299
PURCHASE UNITS				
Alpena State Forest	Cadillac, MI	240	0	240
Huron	Cadillac, MI	3,456	0	3,456
Manistee	Cadillac, MI	280	376	656
Sub-Total		3,967	376	4,352
LAND UTILIZATION PROJECTS				
Au Sable	Cadillac, MI	2	0	2
N. Muskegon Sand Dune	Cadillac, MI	397	0	397
S. Muskegon Sand Dune	Cadillac, MI	600	0	600
Sub-total		999	0	999
NORTHERN HARDWOOD LAB EXPERIMENTAL AREA				
	St. Paul, MN	7	0	7
GRAND TOTAL		2,763,632	2,109,025	4,872,657

SOURCE: U.S. Department of Agriculture, Forest Service. Land Areas of the National Forest System.
FS-383, Annual, p.21.

Table 11-5. Estimated participation in recreation activities in Michigan's National Forests, Fiscal Years 1978-1984.

ACTIVITY	THOUSANDS OF RECREATION VISITOR-DAYS						FY1984
	FY1978	FY1979	FY1980	FY1981	FY1982	FY1983	
Camping	948.9	931.7	1,221.8	1,346.9	1,303.4	1,096.3	957.6
Picnicing	138.5	144.0	131.5	136.9	134.8	108.9	89.5
Mechanized Recreational Travel	2,251.7	1,949.4	2,015.6	1,963.0	1,943.2	1,879.9	1,542.5
Water Travel	N.A.	N.A.	257.1	271.9	280.7	288.1	239.2
Games & Team Sports	8.5	5.9	9.8	10.8	13.0	12.2	8.9
Waterskiing & Other Water Sports	8.8	7.0	6.1	6.8	6.9	6.8	4.2
Swimming & Scuba Diving	123.9	118.1	124.0	128.4	125.7	113.4	102.0
Winter Sports	196.3	144.6	175.2	157.0	173.6	133.6	131.0
Fishing	415.6	385.3	374.5	405.2	455.7	492.7	440.3
Hunting	661.6	624.4	632.7	646.2	641.3	664.0	640.1
Hiking & Mountain Climbing	109.4	93.6	115.1	129.7	127.6	148.9	117.7
Horseback Riding	29.6	33.9	38.0	39.9	35.2	34.0	22.0
Resort Use	3.3	3.2	3.4	2.5	1.0	1.0	1.0
Organization Camp Use	18.0	19.6	12.3	3.2	11.8	7.3	7.1
Recreational Cabin Use	94.1	77.4	77.2	77.3	78.4	75.6	74.9
Gathering Forest Products	60.7	55.4	132.4	148.2	154.7	169.1	132.5
Nature Study	33.6	23.9	31.3	30.8	28.1	32.7	27.9
Viewing Scenes, Sports, Environment	83.2	103.4	81.6	92.8	93.1	101.7	84.3
Visitor Info. Services (exhibits, talks, etc.)	56.0	50.8	47.2	49.2	44.1	32.2	29.8
Total	5,502.8	5,015.7	5,486.8	5,646.7	5,652.3	5,398.4	4,652.5

NOTE: One recreation visitor-day is the recreation use of National Forest land or water that aggregates 12 visitor-hours. This may entail one person for 12 hours, 12 persons for 1 hour, or any equivalent combination of individual or group use, either continuous or intermittent.

SOURCE: U.S. Department of Agriculture, Forest Service. National Forest Recreation: State Summary of Recreation Use, annual. Washington, D.C.: U.S. Forest Service.

Table 11-6. Estimated use of dispersed recreation areas in National Forests in Michigan,
Fiscal Years 1978-1984.

THOUSANDS OF RECREATION VISITOR-DAYS THAT TOOK PLACE AT OR ON ...

FISCAL YEAR	ROADS	TRAILS	LAKES PONDS	RESER- VOIRS	RIVERS/ STREAMS	GREAT LAKES	GENERAL UNDEVEL- OPED AREA	TOTAL
1978	2,035.5	178.5	370.6	24.8	294.4	3.0	1,217.0	4,123.8
1979	1,767.0	191.3	327.5	20.4	269.1	0.0	1,110.3	3,685.5
1980	1,837.0	198.1	334.8	21.4	273.1	0.0	1,365.2	4,029.6
1981	1,779.3	240.3	338.9	20.9	292.5	0.0	1,488.2	4,160.1
1982	1,747.1	244.2	329.4	19.3	322.2	0.0	1,467.9	4,130.1
1983	1,754.1	243.6	363.7	25.4	324.2	0.0	1,447.6	4,158.6
1984	1,494.6	134.7	331.7	13.5	274.8	2.8	1,273.2	3,525.3

NOTE: One recreation visitor-day is the recreation use of National Forest land or water that aggregates 12 visitor-hours. This may entail one person for 12 hours, 12 persons for 1 hour, or any equivalent combination of individual or group use, either continuous or intermittent.

SOURCE: U.S. Dept. of Agriculture, Forest Service. National Forest Recreation: State Summary of Recreation Use, annual. Washington, D.C.: U.S. Forest Service.

Table 11-7. Estimated use of developed recreation sites in National Forests in Michigan, Fiscal Years 1981-1984.

THOUSANDS OF RECREATION VISITOR-DAYS THAT TOOK PLACE AT. . .

Fiscal Year	Interpretive, Observation, & Documentary Sites	Trail Heads	Boating & Fishing Sites	Swim Sites	Camp- grounds	Picnic, Playground, & Sports Sites	Hotels, Lodges, Resorts, & Concessions	Organization Sites	Recreation Residences	Ski Areas	Other Winter Sports Sites	Total
1981	51.9	0.0	152.9	101.1	839.7	143.9	2.6	3.5	77.3	113.2	0.5	1486.6
1982	41.8	0.6	170.2	98.1	856.5	133.8	1.0	17.0	78.4	123.8	1.0	1522.2
1983	44.7	0.3	173.6	86.9	653.1	101.2	1.0	10.8	75.6	91.4	1.2	1239.8
1984	45.1	0.6	134.8	84.8	592.3	87.0	1.0	10.2	74.9	92.6	3.9	1127.2

NOTE: One recreation visitor-day is the recreation use of National Forest land or water that aggregates 12 visitor-hours. This may entail one person for 12 hours, 12 persons for 1 hour, or any equivalent combination of individual or group use, either continuous or intermittent.

SOURCE: U.S. Dept. of Agriculture, Forest Service. National Forest Recreation: State Summary of Recreation Use, annual. Washington, D.C.: U.S. Forest Service.

National Wildlife Refuges in Michigan

The U.S. Fish and Wildlife Service manages seven National Wildlife Refuges in Michigan: Harbor Island, Huron, Kirtland Warbler, Michigan Islands, Seney, Shiawassee, and Wyandotte (Table 11-8). The total area of these refuges is 107,844 acres. Seney and Shiawassee refuges, the largest of the seven refuges in Michigan, account for 97% of this total acreage. All of the Huron refuge and portions of the Michigan Islands and Seney refuges are included in the National Wilderness Preservation System.

Table 11-8. Acreages of Michigan units of the National Wildlife Refuge System as of September 30, 1984.

National Wildlife Refuge	Total Acres	Acres Within the National Wilderness Preservation System	Percentage of Total Acres Within the National Wilderness Preservation System
Harbor Island	695	0	0.0
Huron	147	147	100.0
Kirtland Warbler	1,896	0	0.0
Michigan Islands	363	12	3.3
Seney	95,455	25,150	26.3
Shiawassee	8,984	0	0.0
Wyandotte	304	0	0.0
Total	107,844	25,309	

SOURCE: U.S. Fish and Wildlife Service. n.d. Annual Report of Lands Under Control of the U.S. Fish and Wildlife Service as of September 30, 1984. Washington, D.C.: U.S. Fish and Wildlife Service.

Michigan's National Wildlife Refuges, compared to other federal areas in the state, receive relatively little recreational use. During FY1984 (Oct. 1, 1983 to Sept. 30, 1984), the Seney refuge received 47,577 visits, and the Shiawassee refuge received 57,805 visits (U.S. Fish and Wildlife Service, 1985). Visitation figures are not available for the remaining refuges.

The Soo Locks

The U.S. Army Corps of Engineers operates the Soo Locks at Sault Ste. Marie, Michigan. The opportunity to see huge ocean-going vessels pass through these locks annually attracts thousands of tourists. Visitation to the locks reached an all-time high of 985,400 in 1971 (Table 11-9). In 1984 attendance was an all-time low of 460,994 -- less than half the 1971 figure. Attendance in 1984 was nevertheless higher than the 1984 attendance of Pictured Rocks National Lakeshore (Table 11-2). Visitation in 1985 was 490,367, a 6% increase over 1984 visitation. Attendance at the Locks has consistently peaked in July or August.

Visitation to the Soo Locks steadily declined from the bicentennial year 1976 through 1984, although attendance rose in 1983 before continuing the downward trend in 1984. The increase in attendance in 1983, followed by a decline in 1984, is consistent with patterns displayed by several other indicators of travel activity, including state park day use (Table 12-8), Canadian overnight travel to and through Michigan (Table 5-4), and visitation to Pictured Rocks National Lakeshore (Table 11-2).

Table 11-9. Number of persons visiting the Soo Locks, Sault Ste. Marie, Michigan by month, 1958-1985.

YEAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Jan. 1- Dec. 31 TOTAL	June 1- Oct. 31 TOTAL
1958	0	9,749	74,207	194,021	255,051	78,708	49,325	5,149	0	666,210	651,312
1959	2,475	25,014	79,400	183,571	218,092	68,927	23,270	1,844	0	602,593	573,260
1960	6,612	19,449	63,049	180,712	217,397	69,073	31,392	2,982	0	590,666	561,623
1961	2,201	19,911	63,513	165,936	193,221	57,419	31,893	2,368	0	536,462	511,982
1962	7,912	21,504	83,092	217,999	258,884	72,452	27,384	0	0	689,227	659,811
1963	4,627	23,383	85,282	221,129	272,064	73,892	38,552	3,779	0	722,708	690,919
1964	10,145	28,984	95,203	235,328	272,744	84,013	30,269	4,783	0	761,469	717,557
1965	7,065	33,310	94,240	221,898	255,534	91,402	24,822	2,910	0	731,181	687,896
1966	8,648	19,442	78,930	222,227	269,663	78,125	31,238	3,200	0	711,473	680,183
1967	5,700	33,768	118,530	264,740	278,741	80,036	27,875	2,748	0	812,138	769,922
1968	16,510	34,808	104,847	234,548	286,850	72,758	43,106	3,472	0	796,899	742,109
1969	10,052	38,911	119,309	282,880	324,720	74,352	42,615	5,940	421	899,200	843,876
1970	12,091	27,227	98,440	228,359	279,308	83,033	43,430	5,585	100	777,573	732,570
1971	9,873	39,256	125,124	317,136	330,882	101,085	55,756	5,564	724	985,400	929,983
1972	6,642	46,657	129,106	292,257	289,116	100,099	52,987	7,642	0	924,506	863,565
1973	21,200	38,060	116,699	241,199	276,002	93,986	52,940	7,776	544	848,406	780,826
1974	7,788	29,590	101,114	223,694	261,362	80,105	39,463	7,781	683	751,580	705,738
1975	7,009	38,197	101,451	229,485	256,770	68,018	42,910	6,457	0	750,297	698,634
1976	11,741	39,801	102,761	233,139	247,234	97,716	43,815	3,464	0	779,671	724,665
1977	10,718	50,586	106,060	229,913	235,600	86,766	35,874	4,492	0	760,009	694,213
1978	5,755	39,885	101,239	218,527	221,246	92,478	43,966	5,602	0	728,698	677,456
1979	6,937	29,410	79,348	172,777	191,827	85,623	38,902	4,675	0	609,499	568,477
1980	7,301	32,553	60,810	168,120	202,046	67,106	39,634	3,311	0	580,881	537,716
1981	0	29,386	69,746	151,598	166,874	65,332	27,888	3,749	0	514,573	481,438
1982	0	17,933	71,204	162,025	147,712	65,046	31,952	2,360	0	498,232	477,939
1983	0	16,741	72,651	164,174	166,039	73,780	41,849	3,617	0	538,851	518,493
1984	0	17,541	62,187	139,541	141,621	66,472	29,710	3,922	0	460,994	439,531
1985	5,110	29,556	72,676	149,049	140,651	59,125	31,550	2,650	0	490,367	453,051

NOTE: These data are the number of persons visiting the Soo Locks in general, as opposed to the number of persons visiting the information center. The information center was completed and dedicated on August 19, 1966. Since the opening and closing dates of the park have varied from year to year, comparisons of monthly figures for one year versus another should be made only for those months in which the park was open during the entire month, i.e., June, July, August, September and/or October.

SOURCE: U.S. Army Corps of Engineers, Sault Ste. Marie Area.

References

- U.S. Fish and Wildlife Service. 1985. "National Wildlife Refuge System Public Use Report: Visits by Month." (Computer printout). Washington, D.C.: U.S. Fish and Wildlife Service.
- U.S. National Park Service. n.d. National Park Statistical Abstract 1984. Denver, CO: National Park Service.

CHAPTER 12

MICHIGAN'S STATE PARK SYSTEM

Daniel M. Spotts

Introduction

Michigan's state parks contribute significantly to the state's attractiveness as a tourist destination. These parks provide visitors with both an abundance of outdoor recreation opportunities and a wide variety of scenic and historic attractions. Indeed, many of the most important tourist attractions in Michigan, such as Fort Mackinac, Tahquamenon Falls, Big Spring Kitch-iti-kapi, the Porcupine Mountains, and Fayette townsite, are located in state parks.

State parks in Michigan are administered by two distinct agencies within the Michigan Department of Natural Resources: the Parks Division and the Mackinac Island State Park Commission. The former has responsibility for 68 state parks, 17 state recreation areas, 3 scenic/historic sites, and 2 unadministered units. The latter has responsibility for three state parks in the Mackinac Straits area that contain historic attractions -- Mackinac Island State Park, Fort Michilimackinac State Park, and Old Mill Creek State Park. The overall state park system includes 252,584 acres of land -- 250,309 acres under the control of the Parks Division, and 2,275 acres under the control of the Mackinac Island State Park Commission (Table 12-1).

A National Perspective

Michigan's state park system is one of the largest in the nation. In FY1983-84, Michigan ranked fifth in the nation in number of operational state parks, sixth in total acreage of state parks, and first in number of modern campsites in its system as a whole (Table 12-2). Michigan's state park system is also one of the most heavily visited in the nation. In FY1983-84 Michigan's state park system ranked ninth in number of day visitors, third in number of overnight visitors, and eighth in total number of visitors (Table 12-3). Michigan's rankings in terms of a number of financial variables, however, are somewhat lower than its rankings in terms of size and visitation. Michigan ranked only 19th in state legislative appropriations to its state park operating budget, 11th in total operating budget, and 11th in total fixed capital outlay budget (Table 12-4). State legislatures in Illinois, Ohio, Kentucky, and Minnesota each appropriated substantially more funds to the operating budget of their respective state park systems than did Michigan's state legislature. Legislative appropriations to state park operating budgets in Illinois and Ohio, for example, were more than three times the Michigan legislature's appropriation to Michigan's state park operating budget. Also, the total operating budgets of state park systems in Kentucky and Ohio were each more than 70% higher than the total operating budget of Michigan's state park system.

Utilization of the System

The Parks Division develops statistics on the number of campers and day-users visiting each of its administered units, and statistics on the number of camping permits issued and overnight stays in parks that provide camping. The statistics on number of campers and day-users are useful indicators of general visitation patterns and trends.

Table 12-1. Acreages of and number of campsites in units of Michigan's state park system.

UNIT	ACRES As of 10/1/84	NUMBER OF CAMPSITES ^a			NO. CAMPSITES WITH ELECTRICITY ^a
		Modern	Rustic	Total	
STATE PARKS					
1 Algonac	1,024	201	80	281	201
2 Aloha	91	287	0	287	287
3 Bald Mountain	4,581	ORGANIZATION CAMPING ONLY			
4 Baraga	56	137	0	137	137
5 Bay City	196	263	0	263	263
6 Bewabic	276	144	0	144	144
7 Brimley	151	270	20	290	270
8 Burt Lake	405	375	20	395	375
9 Cambridge State Historic	185	NO CAMPING			
10 Cheboygan	932	78	0	78	78
11 Clear Lake	290	200 ^b	0	200	105
12 Craig Lake	6,983	WILDERNESS CAMPING ONLY			
13 De Tour	403	0	22	22	0
14 Dodge No. 4	136	NO CAMPING			
15 Duck Lake	707	NO CAMPING			
16 Fayette	712	80 ^c	0	80	80
17 Fisherman's Island	2,762	0	90	90	0
18 Fort Wilkins	199	165	0	165	165
19 Grand Haven	48	145	25	170	145
20 Grand Mere	393	NO CAMPING			
21 Harrisville	94	229	0	229	229
22 Hartwick Pines	9,295	62	0	62	46
23 W.J. Hayes	654	212	0	212	160
24 Hoeft	301	144	0	144	144
25 P.J. Hoffmaster	1,043	333	0	333	333
26 Holland	143	368	0	368	344
27 Indian Lake	567	301	0	301	301
28 Interlochen	187	477	71	548	477
29 Lake Gogebic	361	165	0	165	165
30 Lakeport	566	315	0	315	315
31 Leelanau	1,307	0	50	50	0
32 Ludington	4,514	398	0	398	398
33 Maybury	944	ORGANIZATION CAMPING ONLY			
34 F.J. McLain	418	90	6	96	90
35 Mears	50	180	0	180	180
36 Mitchell	72	270	0	270	270
37 Muskellonge Lake	211	179	0	179	179
38 Muskegon	1,125	322	28	350	322
39 Newaygo	257	0	99	99	0
40 Negaunee	1,776	UNDER DEVELOPMENT; WILD AREA			
41 North Higgins Lake	429	218	0	218	218
42 Onaway	158	103	0	103	103
43 Orchard Beach	201	175	0	175	175
44 Otsego Lake	62	203	0	203	203
45 Palms Book	388	NO CAMPING			
46 Petoskey	304	90	0	90	90
47 Porcupine Mountains Wilderness	58,336	183 ^d	24	207	95
48 Port Crescent	569	183	0	183	182
49 Saugatuck Dunes	909	NO CAMPING			
50 Seven Lakes	1,387	NO CAMPING			
51 Silver Lake	2,737	249	0	249	249
52 Sleeper	1,003	280	0	280	280
53 Sleepy Hollow	2,678	20 ^e	0	20	0
54 South Higgins Lake	962	512	0	512	512
55 Sterling	1,001	288	0	288	286
56 Straits	181 ^f	322	0	322	322
57 Sturgeon Point	70	NO CAMPING			
58 Tahquamenon Falls	35,870	259	60	319	259
59 Tawas Point	175	210	0	210	210
60 Traverse City	45	343	0	343	330
61 Twin Lakes	175	62	0	62	62
62 Van Buren	326	220	0	220	220
63 Van Riper	1,044	151	75	226	151
64 Warren Dunes	1,502 ^f	197	0	197	197
65 J.W. Wells	974	162	0	162	162

Table 12-1. Acreages of and number of campsites in units of Michigan's state park system (continued).

UNIT	ACRES As of 10/1/84	NUMBER OF CAMPSITES ^a			NO. CAMPSITES WITH ELECTRICITY ^a
		Modern	Rustic	Total	
66 Wilderness	7,554	210	0	210	210
67 Wilson	36	160	0	160	160
68 Young	263	296	0	296	296
Sub-total	164,054	11,484	670	12,154	11,173
STATE RECREATION AREAS					
1 Brighton	4,915	150	73	223	150
2 Fort Custer	2,962	0	107	107	0
3 Gladwin (unadministered)	365	NO CAMPING			
4 Highland	5,552	0	39	39	0
5 Holly	7,471	160 ^c	0	160	0
6 Ionia	3,998	HORSEMAN'S & ORGANIZATION CAMPING ONLY			
7 Island Lake	3,745	20 ^c	25	45	0
8 Lake Hudson	2,696	NO CAMPING			
9 Metamora-Hadley	683	220	0	220	220
10 Ortonville	4,402	0	32	32	0
11 Pinckney	10,195	220	35	255	220
12 Pontiac Lake	3,701	176 ^c	0	176	81
13 Proud Lake	3,730	110	0	110	110
14 Rifle River	4,329	80	101	181	80
15 Rochester-Utica	1,353	ORGANIZATION CAMPING ONLY			
16 Waterloo	19,002	374	25	399	374
17 Yankee Springs	5,006	220	120	340	213
Sub-total	84,103	1,730	557	2,287	1,448
STATE SCENIC & HISTORIC SITES					
1 Laughing Whitefish Falls Scenic Site	960	NO CAMPING			
2 Sanilac Petroglyphs Historic Site (under development, unadministered)	238	NO CAMPING			
3 Wagner Falls Scenic Site (unadministered)	23	NO CAMPING			
Sub-total	1,221	0	0	0	0
OTHER UNADMINISTERED UNITS					
1 Meridian-Baseline Historic State Park (undeveloped)	87	NO CAMPING			
2 Walter C. Wetzel State Park (open space)	844	NO CAMPING			
Sub-total	931	0	0	0	0
TOTALS FOR UNITS ADMINISTERED BY PARKS DIVISION	250,309	13,214	1,227	14,441	12,621
UNITS ADMINISTERED BY THE MACKINAC ISLAND STATE PARK COMMISSION					
1 Fort Michilimackinac State Park	25	NO CAMPING			
2 Mackinac Island State Park	1,700	ORGANIZATION CAMPING ONLY			
3 Old Mill Creek State Park	550	NO CAMPING			
Sub-Total	2,275	0	0	0	0
GRAND TOTAL, MICHIGAN STATE PARK SYSTEM	252,584	13,214	1,227	14,441	12,621

^a1985 date. Figures do not include organization, horseman's, or backcountry campsites.^bIncludes 95 semi-modern campsites.^cSemi-modern campsites.^dIncludes 88 semi-modern campsites.^eIncludes acreage of the Father Marquette National Memorial and Museum.^fIncludes acreage of the Warren Woods area.

SOURCE: Michigan Department of Natural Resources, Parks Division.

Table 12-2. Size of and number of modern campsites in the nation's state park systems, Fiscal Year 1983-84^a

RANK	STATE	NO. OPERATIONAL STATE PARKS	RANK	STATE	TOTAL ACREAGE	RANK	STATE	NO. MODERN CAMPSITES ^b
1	OR	224	1	AK	2,761,689	1	MI	13,194
2	NY	121	2	CA	933,487	2	NY	8,600
3	PA	103	3	PA	276,998	3	CA	7,848
4	OH	71	4	NY	233,262	4	WA	6,490
5	MI	70 ^c	5	MN	170,101	5	OR	5,245
6	IA	66	6	MI	164,355 ^c	6	PA	4,426
7	CA	65	7	TX	151,824	7	IN	4,209
8	MN	58	8	NM	118,758	8	OH	4,205
9	VT	45	9	WY	117,950	9	IA	4,000
10	GA	42	10	OH	111,797	10	KS	3,623
10	IL	42	11	FL	101,079	11	MA	3,408
11	SC	41	12	MO	100,464	12	TX	3,206
11	WI	41	13	CO	96,131	13	WI	3,154
12	MA	39	14	OK	91,230	14	MN	3,068
12	NM	39	15	OR	89,107	15	TN	2,923
13	OK	36	16	IL	83,317	16	CO	2,855
14	CT	34	17	SD	79,090	17	OK	2,755
15	NJ	30	18	SC	76,999	18	FL	2,666
16	FL	29	19	NV	69,404	19	MD	2,612
17	NC	27	20	WI	67,928	20	GA	2,598
17	TX	27	21	NJ	65,149	21	KY	2,586
18	WA	23	22	UT	63,242	22	SC	2,539
19	KS	22	23	WA	57,813	23	VT	2,181
20	AL	21	24	WV	56,992	24	SD	1,871
20	RH	21	25	MO	56,765	25	MS	1,616
21	MS	20	26	IN	53,886	26	AR	1,420
21	VA	20	27	TN	53,358	27	VA	1,392
22	IN	18	28	GA	52,833	28	MO	1,389
22	TN	18	29	IA	51,000	29	WV	1,311
23	HI	15	30	AL	48,027	30	NC	1,255
23	KY	15	31	VA	45,710	31	CT	1,240
24	WV	14	32	KS	35,788	32	AZ	1,199
25	DE	12	33	AR	35,318	33	NJ	1,145
25	LA	12	34	VT	30,913	34	RI	1,129
25	ME	12	35	MA	29,130	35	UT	965
25	SD	12	36	NE	28,720	36	ID	953
26	MD	11	37	KY	26,080	37	LA	882
26	WY	11	38	LA	25,119	38	NE	800
27	AR	10	39	HI	21,467	39	NM	751
27	MT	10	40	NE	20,654	40	DE	708
27	NV	10	41	MS	20,343	41	ND	695
28	ND	9	42	CT	18,691	42	NV	185
29	CO	8	43	NH	12,978	43	HI	65
30	AK	7	44	MT	11,337	44	AK	63
31	NE	6	45	DE	10,143	45	MT	7
32	UT	5	46	ND	6,454	--	AL	N.A.
--	AZ	N.A.	--	AZ	N.A.	--	IL	N.A.
--	ID	N.A.	--	ID	N.A.	--	ME	N.A.
--	MO	N.A.	--	NC	N.A.	--	NH	N.A.
--	RI	N.A.	--	RI	N.A.	--	WY	N.A.

^aJuly 1, 1983 to June 30, 1984.^bIncludes both seasonal and year-round modern campsites.^cIncludes state parks operated by both Parks Division and Mackinac Island State Park Commission. Source figures included only state parks operated by Parks Division.SOURCE: National Association of State Park Directors, n. d. Annual Information Exchange 1985. Indianapolis, IN: Indiana Dept. of Natural Resources, Division of State Parks.

Table 12-3. Visitation to the nation's state park systems, Fiscal Year 1983-84^a

Rank State	Number of Day Visitors ^b	Rank State	Number of Overnight Visitors ^c	Rank State	Total Number of Visitors ^d
1 CA	59,020,739	1 OK	9,966,980	1 CA	65,787,553
2 OH	58,465,838	2 CA	6,766,814	2 OH	61,146,566
3 NY	44,222,410	3 MI	5,312,744 ^e	3 NY	47,031,177
4 WA	38,385,060	4 NY	2,808,767	4 WA	40,518,292
5 OR	34,150,000	5 AK	2,736,000	5 OR	35,820,000
6 PA	33,559,304	6 GA	2,722,041	6 PA	35,073,892
7 KY	22,861,700	7 OH	2,680,728	7 IL	31,105,143
8 HI	19,022,507	8 TX	2,472,975	8 MI	24,041,576 ^e
9 MI	18,728,832 ^e	9 WA	2,133,232	9 KY	23,942,756
10 TN	18,594,935	10 OR	1,670,000	10 TN	19,998,410
11 TX	16,197,843	11 IN	1,623,900	11 HI	19,123,283
12 FL	13,808,442	12 NM	1,610,361	12 TX	18,670,818
13 IA	13,202,877	13 PA	1,514,588	13 OK	17,283,339
14 MA	10,203,744	14 WI	1,486,336	14 FL	14,976,731
15 WI	10,042,914	15 TN	1,403,475	15 IA	13,646,875
16 MO	8,842,983	16 KS	1,343,121	16 WI	11,529,250
17 SC	8,419,280	17 FL	1,168,289	17 MA	11,060,017
18 CT	8,226,648	18 KY	1,081,056	18 GA	10,888,164
19 NJ	8,168,830	19 SC	1,068,389	19 MO	9,822,584
20 GA	8,166,123	20 MO	979,601	20 SC	9,487,669
21 WV	7,836,701	21 NE	916,315	21 IN	8,743,000
22 OK	7,316,359	22 WY	889,123	22 NJ	8,656,794
23 IN	7,119,100	23 MA	856,273	23 WV	8,656,575
24 NE	6,936,484	24 WV	819,874	24 CT	8,641,857
25 CO	6,680,733	25 AL	784,455	25 NE	7,852,799
26 RI	6,280,000	26 AR	677,460	26 CO	7,158,105
27 AR	5,651,772	27 MN	645,117	27 RI	6,780,000
28 NC	5,510,322	28 MD	614,711	28 AR	6,329,232
29 MN	5,412,049	29 MT	538,000	29 MN	6,057,166
30 MD	5,023,302	30 VA	500,603	30 NC	5,782,059
31 SD	4,800,761	31 RI	500,000	31 MO	5,638,013
32 AL	4,656,944	32 NJ	487,964	32 AL	5,441,399
33 NH	4,351,804	33 CO	477,372	33 NH	5,367,871
34 UT	4,143,304	34 MS	467,489	34 SD	5,144,448
35 MS	3,993,876	35 DE	450,569	35 NH	4,574,300
36 NM	3,757,510	36 IA	443,998	36 AK	4,560,000
37 NV	3,716,467	37 CT	415,209	37 UT	4,555,080
38 MT	3,348,700	38 UT	411,776	38 MS	4,461,365
39 VA	2,742,073	39 SD	343,687	39 KS	4,048,102
40 KS	2,704,981	40 VT	341,700	40 NV	3,929,225
41 DE	2,680,689	41 ME	277,815	41 MT	3,886,700
42 ME	2,482,458	42 NC	271,737	42 VA	3,242,676
43 AK	1,824,000	43 LA	269,565	43 DE	3,131,258
44 AZ	1,774,201	44 AZ	222,785	44 ME	2,760,273
45 ID	1,674,246	45 NH	222,496	45 WY	2,057,576
46 WY	1,168,453	46 NV	212,758	46 AZ	1,996,986
47 LA	875,991	47 ID	162,457	47 ID	1,836,703
48 ND	850,172	48 ND	114,140	48 LA	1,145,556
49 VT	538,612	49 HI	100,776	49 ND	964,312
-- IL	N.A.	-- IL	N.A.	50 VT	880,312

^aJuly 1, 1983 to June 30, 1984.^bTypographical and/or computational errors in the source in the case of LA and MN have been corrected.^cTypographical and/or computational errors in the source in the case of MT and OR have been corrected.^dEquals the sum of day visitors and overnight visitors. Typographical and/or computational errors in the source in the case of AZ, FL, KS, LA, MN, MT, NM, NY, OR, and WV have been corrected.^eEquals sum of visitation to state parks operated by the Parks Division and the Mackinac Island State Park Commission.SOURCE: National Association of State Park Directors. n.d. Annual Information Exchange 1985. Indianapolis, IN: Indiana Dept. of Natural Resources, Div. of State Parks.

Table 12-4. Selected financial aspects of the nation's state park systems, Fiscal Year 1983-84^a

RANK	STATE	STATE LEGISLATIVE APPROPRIATION TO OPERATING BUDGET ^b	RANK	STATE	TOTAL OPERATING BUDGET	RANK	STATE	TOTAL FIXED CAPITAL OUTLAY BUDGET
1	NY	\$76,000,000	1	CA	\$105,712,000	1	CA	\$45,537,000
2	CA	66,245,000	2	NY	78,930,000	2	PA	30,534,217
3	PA	26,035,000	3	KY	44,117,187	3	NY	19,052,000
4	IL	21,844,800	4	OH	30,772,192	4	FL	18,449,772
5	OH	21,304,340	5	PA	26,035,000	5	OH	14,044,642
6	FL	20,135,793	6	TN	22,329,910	6	TX	13,163,388
7	KY	15,725,300	7	IL	21,844,800	7	MN	7,956,840
8	WA	14,707,627	8	TX	21,257,134	8	MA	5,608,026
9	MA	14,092,465	9	FL	20,135,793	9	NM	5,415,000
10	NJ	13,225,397	10	WA	19,588,307	10	MO	5,129,500
11	GA	9,562,479	11	MI	17,774,700 ^c	11	MI	4,585,300 ^c
12	TN	9,507,813	12	GA	16,797,245	12	CO	4,006,083
13	TX	8,604,894	13	OK	15,334,868	13	MO	3,780,000
14	CT	8,000,000	14	MA	15,289,525	14	AK	3,750,000
15	MN	6,870,000	15	WV	14,170,078	15	UT	3,630,526
16	LA	6,708,272	16	OR	14,028,102	16	IL	3,592,100
17	AR	6,659,031	17	AR	13,986,774	17	TN	3,474,000
18	MO	5,944,620	18	NJ	13,225,397	18	IN	3,473,182
19	MI	5,895,300 ^c	19	AL	11,796,089	19	GA	3,015,953
20	MD	5,425,163	20	MS	11,319,952	20	WI	2,934,300
21	MS	5,344,227	21	MN	9,984,000	21	MS	2,720,423
22	WV	4,999,592	22	SC	9,468,431	22	NC	2,444,722
23	VA	4,920,040	23	MD	8,776,934	23	SC	2,258,480
24	AK	4,815,000	24	MO	8,121,636	24	NJ	2,250,000
25	NC	3,871,266	25	CT	8,000,000	25	WA	2,186,083
26	UT	3,693,257	26	CO	7,875,441	26	MT	2,159,500
27	HI	3,634,947	27	IN	7,164,176	27	HI	1,791,250
28	WI	3,161,200	28	LA	6,825,765	28	KS	1,791,050
29	ME	3,100,000	29	WI	6,598,200	29	KY	1,715,000
30	AZ	3,099,991	30	UT	6,264,055	30	VA	1,707,085
31	OR	3,096,723	31	NE	5,366,495	31	CT	1,550,000
32	SC	2,466,060	32	VA	4,920,040	32	NE	1,538,560
33	NE	2,331,626	33	NC	4,903,181	33	OK	1,514,691
34	KS	2,266,155	34	NM	4,894,923	34	SD	1,195,727
35	IN	2,200,000	35	AK	4,815,000	35	ID	1,098,900
36	WY	2,159,626	36	NH	4,795,073	36	LA	1,065,000
37	AL	1,769,097	37	KS	3,977,756	37	NV	952,106
38	SD	1,419,745	38	RI	3,771,998	38	WY	919,869
39	ID	1,256,500	39	HI	3,713,526	39	WV	776,079
40	NV	1,230,015	40	SD	3,684,323	40	ME	775,800
41	DE	1,125,145	41	ME	3,500,000	41	AR	740,195
42	ND	1,026,513	42	AZ	3,260,000	42	AZ	718,193
43	VT	887,800	43	DE	3,156,167	43	VT	520,000
44	MT	628,500	44	MT	2,504,000	44	ND	389,743
45	NH	385,130	45	VT	2,447,600	45	OR	217,897
46	OK	10,623	46	WY	2,270,354	46	DE	205,000
--	CO	N.A.	47	ID	2,188,700	--	AL	N.A.
--	IA	N.A.	48	NV	1,771,967	--	IA	N.A.
--	NH	N.A.	49	ND	1,570,432	--	NH	N.A.
--	RI	N.A.	--	IA	N.A.	--	RI	N.A.

^a July 1, 1983 to June 30, 1984.^b Includes "appropriation-general fund," "general fund," "legislative appropriations-general revenues," "legislative appropriations," "state funds," and "cash funds." Many state legislatures also appropriate funds to the fixed capital outlay budgets of their respective state park systems.^c Equals sum of Parks Division and Mackinac Island State Park Commission appropriations/budgets. Source figures included only Parks Division appropriations/budgets.

SOURCE: National Association of State Park Directors. n.d. Annual Information Exchange 1985. Indianapolis, IN: Indiana Dept. of Natural Resources, Division of State Parks.

However, they are estimates rather than actual counts of persons. Estimates of day-users are made by multiplying vehicle counts by an average value for persons per vehicle and then adding the number of persons who walked into the park. Vehicle counts are obtained from automatic traffic counter data, counts made at public contact booths, or counts of the number of vehicles in parking lots multiplied by a factor of three to account for vehicle turnover. Estimates of the number of campers are made by multiplying the number of camping parties camping in the park on a given day by an average value for number of persons per camping party. Statistics on number of camping permits issued are actual counts of permits issued. Statistics on number of overnight stays are actual counts based on daily tours of campgrounds. Tables 12-5 through 12-13 present attendance figures for each administered unit under the control of the Parks Division. Figures on individual parks as well as the system as a whole are provided since such figures are useful indicators of tourist flows in specific locales, particularly in the case of towns that are dependant on the tourist traffic to a specific state park for their economic well-being. The annual attendance figures for 1977-1984 provide an indication of visitation trends over time; the monthly attendance figures for 1984 document the seasonality of visitation to each park.

Statistics on visitation to the state park system as a whole indicate that from 1977 through 1984 the number of campers declined from 5.9 million to 5.2 million (Table 12-5). The number of camping permits issued likewise declined from 480,121 in 1977 to 391,470 in 1984 (Table 12-6). The number of overnight stays in the parks has been relatively static in recent years. The number of overnight stays in FY1985 differed from the number of overnight stays in FY1983 by only 0.8% (Table 12-7).

The number of day-users declined from a high of 17.8 million in 1978 to a low of 15.3 million in 1982, and then climbed to 17.6 million in 1983, perhaps reflecting the recent recession and recovery in Michigan. Overall, day-use rose from 16.4 million in 1977 to 17.1 million in 1984 (Table 12-8). This overall increase tended to cancel the overall decline in the number of campers during this period, so that in 1984 total visitation was 22.4 million, or roughly the same as the 22.3 million recorded in 1977 (Table 12-9). The three most heavily visited parks in the system--Holland, Warren Dunes, and Grand Haven--are all located in the southwest region of the state on the shores of Lake Michigan (Table 12-9). Monthly statistics on the system as a whole indicate that in 1984 the number of campers, day-users, and camp permits issued all peaked in July (Tables 12-10, 12-11, and 12-13).

Occupancy rates in state park campgrounds vary widely (Table 12-14). In recent years occupancy rates for Baraga State Park, for example, were under 30%, whereas occupancy rates for Grand Haven State Park exceeded 95%. Further information on state park camping is provided in Chapter 13.

Attendance at attractions operated by the Mackinac Island State Park Commission has been generally consistent over the last three seasons. However, attendance at most attractions during the 1985 season was somewhat lower compared to attendance during 1984 (Table 12-15).

Potential Additions to the System

Over the last decade the feasibility and potential value of constructing underwater parks on Michigan's Great Lakes shoreline has been a topic of considerable discussion and inquiry. Operating such attractions as state parks is frequently cited as a possible management option. Michigan has established four underwater preserves to protect large

concentrations of 19th and early 20th century shipwrecks from pillaging by artifact hunters and destruction by salvage operators. These preserves, administered jointly by the Land Resource Programs Division of the Michigan Department of Natural Resources and the History Division of the Michigan Department of State, serve to ensure the quality of recreational diving experiences. However, the construction of parks with museums and developments to enable non-divers to view shipwrecks, such as underwater walkways and submarines, has not been undertaken, largely because of financial constraints. Further information on underwater parks is provided in the literature cited below.

References

- Bilodeau, Matthew A. 1978. "Application of Peak Use Measurements to Michigan State Park Camping in 1976." Technical paper for M.S. degree, Department of Park and Recreation Resources, Michigan State University. East Lansing.
- Dedera, Don. 1983. "America's Marine Sanctuaries" Exxon USA. 22(3):24-28. Published by Public Affairs Dept. of the Exxon Company, USA, Houston, TX.
- Holecek, Donald F. and Susan J. Lothrop. 1980. Attitudes of a Scuba Diving Population Concerning Government Regulation of Underwater Resources. Michigan Sea Grant Publication MICHU-SG-80-201. Ann Arbor, MI: Michigan Sea Grant Publications.
- Holecek, Donald F. and E. Thomas Smiley. 1982. Management Guidelines for Michigan's Great Lakes Bottomland Preserves. Michigan Sea Grant Publication MICHU-SG-82-201. Ann Arbor, MI: Michigan Sea Grant Publications.
- Hulse, Charles A. and Donald F. Holecek (eds.). 1979. Underwater Parks: Symposium Proceedings. Michigan State University Extension Bulletin E-1350/Michigan Sea Grant Publication MICHU-SG-79-902. Ann Arbor, MI: Michigan Sea Grant Publications.
- Hulse, Charles A. and Donald F. Holecek. 1980. Michigan's Coastal Waters: A Pilot Study in Underwater Cultural Resources. Michigan Sea Grant Publication MICHU-SG-80-204. Ann Arbor, MI: Michigan Sea Grant Publications.
- Matheusik, Mick R.E. and Allan S. Mills. 1983. "Selection of Underwater Park Target Markets: A Canadian Example." Journal of Park and Recreation Administration. 1(4):53-65.
- Michigan Dept. of Natural Resources, Land Resource Program Division. n.d. Michigan Great Lakes Underwater Resources. Lansing, MI: Michigan Dept. of Natural Resources.
- Rottman, Kathryn Marie. 1979. "Trends in Seasonality of Michigan State Park Use." Unpublished Master's thesis, Department of Park and Recreation Resources, Michigan State University. East Lansing.
- Silagy, Jeffry John. 1985. "Michigan State Parks; Past Trends and Future Directions." Technical paper for M.S. degree, Department of Resource Development, Michigan State University. East Lansing.

Smiley, E. Thomas and Donald F. Holecek (eds.). 1982. Aquatic Park Management: Symposium Proceedings. Michigan Sea Grant Publication MICHU-SG-82-900. Ann Arbor, MI: Michigan Sea Grant Publications.

Warner, Thomas D. and Donald F. Holecek. 1978. "Underwater Parks: An Unexplored Recreation Frontier?" Parks and Recreation. 13(11):18-20, 36.

Table 12-5. Estimated number of campers visiting Michigan State Parks and Recreation Areas, 1977-1984.

State Park or Recreation Area	1977	1978	1979	1980	1981	1982	1983	1984
REGION I								
Baraga	42,426	39,078	25,958	23,640	25,492	24,589	26,656	26,448
Bewabic	32,524	32,362	25,068	27,198	23,640	23,711	24,783	24,168
Brimley	115,909	109,285	86,098	81,457	85,645	77,248	95,258	83,727
Fayette	40,537	38,493	27,171	26,960	29,807	28,420	27,888	24,646
Fort Wilkins	91,726	87,500	77,897	66,188	64,235	61,205	61,811	57,727
Indian Lake	117,222	110,272	80,036	79,146	78,524	81,508	80,666	77,116
Lake Gogebic	43,989	53,517	37,974	27,670	28,551	31,552	30,661	27,685
Mc Lain	52,907	54,492	45,786	45,056	47,807	44,554	48,693	43,383
Muskallonge Lake	56,412	52,401	40,487	44,196	47,452	46,989	49,827	47,181
Palms Book	0	0	0	0	0	0	0	0
Porcupine Mountains	139,654	138,333	117,590	128,705	132,990	122,731	103,411	91,238
Straits	169,461	172,669	145,906	141,376	152,528	159,175	161,318	151,053
Tahquamenon Falls	162,730	157,307	131,676	131,735	131,123	126,188	117,564	113,249
Twin Lakes	17,910	16,633	10,995	10,974	12,226	12,395	14,175	13,022
Van Riper	87,515	79,752	59,506	57,710	59,307	61,001	57,888	53,070
Wells	53,419	49,958	42,431	40,841	41,641	43,151	49,105	47,088
Region I Total	1,224,341	1,192,052	954,579	932,852	960,968	944,417	949,704	880,801
REGION II								
Aloha	102,045	102,991	95,222	92,373	97,171	99,705	96,931	98,519
Bay City	89,185	89,495	74,307	63,407	58,496	61,527	60,754	66,406
Burt Lake	138,993	151,745	128,157	125,148	126,570	127,420	131,474	114,701
Cheboygan	26,049	21,771	18,191	17,174	16,621	19,708	17,765	18,479
Clear Lake	46,476	42,209	36,521	32,285	31,560	31,258	30,461	30,970
Fishermans Island	0	18,030	17,100	17,288	21,626	29,753	31,705	29,982
Gladwin	17,446	15,147	16,128	14,087	12,784	12,609	0	0
Harrisville	97,373	96,382	85,817	88,477	85,529	94,455	93,292	86,774
Hartwick Pines	43,997	45,240	38,862	33,820	36,061	39,616	37,845	37,446
Hoelt	44,610	41,275	32,644	33,179	31,047	31,588	34,840	33,032
Interlochen	186,744	183,815	167,855	163,359	166,784	169,050	167,508	162,588
Leelanau	19,435	22,910	24,370	23,454	24,290	28,180	32,223	33,760
Ludington	258,965	257,331	259,167	252,479	256,955	266,594	267,473	264,453
Mears	76,143	77,553	76,837	75,391	78,096	80,308	79,483	82,074
Mitchell	160,922	153,008	142,434	135,783	140,465	139,785	140,251	140,059
Newaygo	28,626	29,422	27,339	23,248	21,252	13,299	18,560	19,215
North Higgins Lake	76,689	77,700	75,637	73,179	76,273	76,517	87,094	82,331
Onaway	36,256	33,712	30,077	25,399	26,172	26,505	25,147	25,024
Orchard Beach	84,747	85,465	76,287	71,193	72,279	80,409	81,566	80,959
Otsego Lake	102,468	100,779	93,828	88,684	89,954	88,252	88,200	80,237
Petoskey	57,944	58,117	53,977	54,072	52,550	51,484	51,087	51,407
Pinconning	0	0	0	0	0	0	0	0
Rifle River	67,362	68,941	69,954	71,593	73,660	72,501	69,738	70,592
Silver Lake	120,887	123,572	116,111	113,659	112,939	104,407	104,014	104,556
South Higgins Lake	198,798	201,590	195,903	186,258	189,605	182,855	183,092	181,777

Tawas Point	88,313	93,022	88,714	82,798	82,196	84,776	85,444	80,444
Traverse City	179,561	175,671	172,162	169,730	168,410	172,990	175,672	173,716
White Cloud	24,705	20,650	17,858	15,335	10,929	9,261	0	0
Wilderness	118,556	115,795	108,639	106,170	105,873	104,799	101,921	102,905
Wilson	72,650	69,553	50,631	44,888	53,791	57,237	60,829	55,399
Young	111,260	113,641	106,094	104,833	103,886	102,513	108,417	103,966
Region II Total	2,677,205	2,686,532	2,496,823	2,398,743	2,423,824	2,459,361	2,462,786	2,411,771

REGION III

Algonac	114,926	110,501	116,506	98,609	113,760	126,633	112,749	125,961
Bald Mountain	9,565	9,570	11,163	8,851	0	0	0	0
Brighton	69,156	75,899	70,212	68,623	62,466	63,098	56,717	62,314
Cambridge	0	0	0	0	0	0	0	0
Dodge No. 4	0	0	0	0	0	0	0	0
Duck Lake	0	0	0	0	0	0	0	0
Fort Custer	0	0	0	80	48	12,374	17,805	22,279
Grand Haven	72,262	74,645	75,286	72,999	79,924	78,198	80,124	83,437
Hayes	92,772	92,914	93,466	89,678	83,473	87,685	84,626	86,341
Highland	13,597	17,711	15,853	14,833	16,458	15,384	10,968	12,840
Hoffmaster	125,730	132,803	139,134	131,928	139,939	138,796	148,483	154,784
Holland	161,061	158,501	158,832	152,535	161,457	161,077	170,891	172,006
Holly	25,992	23,645	24,138	20,706	20,308	38,447	36,461	41,947
Ionia	189	291	969	1,067	1,908	1,736	893	1,096
Island Lake	17,539	13,621	10,939	11,882	13,262	10,900	10,136	17,217
Lake Hudson	0	0	0	0	0	0	0	0
Lakeport	128,146	129,115	112,290	118,324	118,302	122,809	127,248	121,533
Maybury	0	0	231	470	824	800	947	643
Metamora-Hadly	104,545	95,754	102,434	86,773	91,628	89,859	90,997	92,296
Muskegon	82,828	86,587	87,393	87,747	87,653	93,299	99,354	100,728
Ortonville	22,276	22,570	19,735	20,665	12,957	11,873	7,838	8,388
Pinckney	121,342	116,780	98,709	89,159	72,696	66,929	70,760	75,728
Pontiac Lake	5,923	5,417	5,453	4,526	6,358	1,757	5,502	6,654
Port Crescent	99,411	100,983	92,875	86,274	88,706	88,384	91,325	91,349
Proud Lake	62,495	69,338	70,545	60,080	47,229	61,658	54,197	61,601
Rochester-Utica	120	149	162	168	226	0	30	16
Sanilac	4,253	4,340	3,147	2,186	2,195	0	0	0
Saugatuck	0	0	0	0	0	0	0	0
Seven Lakes	0	0	0	0	0	0	0	0
Sleeper	94,412	88,933	89,343	91,252	97,814	97,074	93,142	97,846
Sleepy Hollow	1,523	1,234	984	729	1,222	892	806	2,951
Sterling	81,055	100,424	90,516	91,763	97,820	93,919	81,384	79,310
Van Buren	75,385	84,606	77,321	74,221	77,849	83,619	87,249	87,445
Warren Dunes	131,570	118,892	113,452	114,164	107,963	128,128	85,700	85,518
Waterloo	154,354	153,536	135,236	126,529	135,319	118,824	114,445	107,561
Yankee Springs	126,052	126,499	130,219	128,117	132,051	136,371	130,812	136,479
Region III Total	1,998,479	2,015,258	1,946,543	1,854,938	1,871,815	1,930,523	1,871,589	1,936,268
State Grand Total	5,900,025	5,893,842	5,397,945	5,186,533	5,256,607	5,334,301	5,284,079	5,228,840

SOURCE: Michigan Department of Natural Resources, Parks Division.

Table 12-6. Number of camping permits issued at Michigan State Parks and Recreation Areas, 1977-1984.

State Park or Recreation Area	1977	1978	1979	1980	1981	1982	1983	1984
REGION I								
Baraga	4,583	3,971	2,716	2,430	2,630	2,578	2,734	2,769
Bewabic	3,088	3,070	2,274	2,425	2,258	2,264	2,376	2,262
Brimley	11,876	11,190	8,578	8,951	8,394	7,729	8,781	8,076
Fayette	4,058	3,802	2,850	2,992	3,009	3,034	3,086	2,695
Fort Wilkins	8,914	8,593	7,372	6,670	6,595	6,310	6,265	5,875
Indian Lake	11,561	11,183	7,792	7,645	7,715	8,052	7,954	7,700
Lake Gogebic	4,468	5,099	3,450	2,710	2,706	2,897	2,845	2,591
Mc Lain	4,797	4,679	4,077	4,075	4,376	4,059	4,683	4,014
Muskellonge Lake	5,123	4,818	3,694	4,032	4,188	4,172	4,354	4,112
Palms Book	0	0	0	0	0	0	0	0
Porcupine Mountains	12,825	13,147	10,892	11,911	10,920	10,523	9,836	9,221
Straits	18,375	17,784	15,106	14,583	15,625	16,191	16,509	15,477
Tahquamenon Falls	18,384	17,562	14,655	14,390	14,135	13,615	12,842	12,227
Twin Lakes	1,667	1,474	1,055	1,004	1,181	1,182	1,336	1,213
Van Riper	8,631	8,074	5,756	5,686	5,550	5,712	5,475	4,998
Wells	5,391	5,062	4,262	4,111	4,104	4,220	4,823	4,605
Region I Total	123,741	119,508	94,529	93,615	93,386	92,538	93,899	87,835
REGION II								
Aloha	6,243	6,243	5,544	5,356	5,544	5,569	5,321	4,738
Bay City	8,468	8,661	6,532	6,004	5,516	5,775	5,680	6,134
Burt Lake	11,787	12,009	9,833	9,633	9,613	9,921	9,775	9,211
Cheboygan	2,540	2,124	1,766	1,545	1,532	1,723	1,658	1,683
Clear Lake	3,257	3,114	2,653	2,344	2,207	2,205	2,094	2,247
Fishermans Island	0	1,430	1,114	1,323	1,933	2,782	2,807	2,599
Gladwin	1,531	1,238	1,297	1,123	1,038	1,009	0	0
Harrisville	7,988	7,675	6,742	6,700	6,533	7,213	6,964	6,554
Hartwick Pines	4,352	4,560	3,836	3,424	3,649	4,046	3,802	3,943
Hoefl	4,029	3,747	3,029	2,928	2,786	2,764	3,070	2,889
Interlochen	12,831	12,200	11,612	11,158	10,988	11,369	11,647	10,931
Leelanau	1,790	2,009	2,273	2,111	2,297	2,480	2,574	2,485
Ludington	15,311	15,555	15,144	14,365	14,248	14,707	14,332	13,652
Mears	4,447	4,885	4,314	4,184	4,213	4,301	4,691	4,334
Mitchell	11,100	10,771	9,422	8,889	8,713	9,012	9,226	9,065
Newaygo	2,320	2,435	2,244	1,706	1,774	1,746	1,561	1,580
North Higgins Lake	6,167	6,295	6,116	5,724	5,452	5,491	5,922	5,747
Onaway	2,779	2,480	2,217	1,882	1,943	1,986	1,859	1,857
Orchard Beach	6,887	7,087	6,351	5,446	5,659	6,254	6,087	6,797
Otsego Lake	6,424	6,462	5,768	5,401	5,426	5,173	5,113	4,458
Petoskey	5,355	5,311	4,841	4,885	3,995	3,729	3,834	3,843
Pinconning	0	0	0	0	0	0	0	0
Rifle River	5,214	5,397	5,353	5,277	5,393	5,381	5,185	5,376
Silver Lake	9,012	9,265	8,401	8,045	7,969	6,545	6,211	6,249
South Higgins Lake	14,169	14,597	13,577	12,532	12,277	12,063	12,020	11,610
Tawas Point	7,417	7,499	7,048	6,520	6,502	6,596	6,490	5,819

Traverse City	14,770	14,644	13,807	13,117	12,880	13,768	12,480	11,585
White Cloud	2,087	1,860	1,570	1,355	1,268	1,225	0	0
Wilderness	10,493	10,419	9,737	9,315	9,030	8,954	8,568	8,539
Wilson	5,676	5,288	4,743	4,043	4,226	4,257	4,144	3,946
Young	7,290	7,604	6,762	6,338	6,020	5,546	5,401	4,881
Region II Total	201,734	202,864	183,646	172,673	170,624	173,590	168,516	162,752

REGION III

Algonac	8,308	8,042	8,165	6,620	7,643	8,443	7,549	8,307
Bald Mountain	995	1,046	994	816	42	46	30	25
Brighton	6,012	6,165	5,694	5,365	4,892	5,020	4,515	4,920
Cambridge	0	0	0	0	0	0	0	0
Dodge No. 4	0	0	0	0	0	0	0	0
Duck Lake	0	0	0	0	0	0	0	0
Fort Custer	0	0	0	2	2	981	1,544	1,899
Grand Haven	4,186	4,057	4,176	3,396	3,619	3,404	3,280	3,111
Hayes	7,113	6,956	6,764	6,464	5,950	6,033	5,460	5,479
Highland	1,124	1,224	1,160	1,091	1,111	1,114	1,081	1,095
Hoffmaster	9,307	10,302	9,930	9,593	9,757	10,455	10,509	10,628
Holland	11,180	10,857	9,849	9,473	9,996	7,934	10,053	10,085
Holly	2,499	2,461	2,439	2,382	2,316	3,590	3,183	3,446
Ionia	20	36	78	100	171	140	104	87
Island Lake	1,413	1,318	769	1,014	1,086	1,026	954	1,486
Lake Hudson	0	0	0	0	0	0	0	0
Lakeport	10,150	10,385	8,793	9,315	9,402	9,772	10,167	9,795
Maybury	0	0	8	17	17	16	22	15
Metamora-Hadly	6,847	6,492	6,289	6,123	5,886	6,434	6,486	6,312
Muskegon	8,309	8,514	8,173	8,013	7,534	7,722	7,989	7,450
Ortonville	1,974	1,881	1,776	1,589	1,151	1,109	750	755
Pinckney	8,195	7,810	6,803	6,192	5,752	5,545	5,257	5,440
Pontiac Lake	471	439	437	346	396	219	462	635
Port Crescent	6,575	6,748	6,448	5,610	5,776	5,630	6,222	5,971
Proud Lake	6,220	5,543	5,487	4,794	4,177	4,490	4,535	4,767
Rochester-Utica	6	5	3	7	5	0	3	2
Sanilac	394	414	341	299	224	0	0	0
Saugatuck	0	0	0	0	0	0	0	0
Seven Lakes	0	0	0	0	0	0	0	0
Sleeper	7,730	7,187	7,171	7,211	7,139	6,946	6,148	6,847
Sleepy Hollow	28	42	38	24	39	28	32	281
Sterling	7,157	7,977	7,312	7,254	7,179	6,816	6,105	5,916
Van Buren	6,669	6,925	6,642	6,470	6,456	7,340	7,468	7,192
Warren Dunes	12,560	11,322	10,373	10,173	9,681	11,489	11,918	11,289
Waterloo	10,345	10,087	9,434	9,247	8,758	9,206	9,230	9,171
Yankee Springs	8,859	8,950	8,450	8,162	8,237	8,326	8,369	8,477
Region III Total	154,646	153,185	144,196	137,162	134,394	139,274	139,425	140,883
State Grand Total	480,121	475,557	422,371	403,450	398,404	405,402	401,840	391,470

NOTE: Data include camping permits issued to camping parties using backcountry, organization, and horseman's campsites.

SOURCE: Michigan Department of Natural Resources, Parks Division.

Table 12-7. Number of overnight stays in campgrounds and backcountry in Michigan State Parks and Recreation Areas, Fiscal Years 1983-1985.

State Park or Recreation Area	FISCAL YEAR (OCTOBER 1 TO SEPTEMBER 30)		
	1982-83	1983-84	1984-85
REGION I			
Baraga	3,910	3,883	3,554
Bewabic	4,156	3,789	4,423
Brimley	15,938	13,954	13,370
Fayette	4,106	3,512	3,588
Fort Wilkins	9,550	8,937	9,348
Indian Lake	13,049	12,500	12,603
Lake Gogebic	5,212	4,771	4,177
Mc Lain	8,314	7,474	8,389
Muskallonge Lake	9,388	8,952	9,365
Palms Book	0	0	0
Porcupine Mountains	19,380	14,485	15,896
Straits	25,303	24,014	22,829
Tahquamenon Falls	18,603	18,056	17,792
Twin Lakes	2,293	2,160	2,163
Van Riper	8,335	7,709	7,397
Wells	7,409	7,206	6,863
Region I Total	154,946	141,402	141,757
REGION II			
Aloha	19,205	19,627	18,598
Bay City	9,546	10,104	11,038
Burt Lake	24,735	23,885	22,771
Cheboygan	2,667	2,846	3,003
Clear Lake	5,940	5,960	6,996
Fishermans Island	4,992	4,697	4,797
Gladwin	4	0	0
Harrisville	18,572	17,140	16,107
Hartwick Pines	6,066	6,003	5,860
Higgins Lake - North	16,330	14,718	14,386
Higgins Lake - South	37,139	36,592	36,548
Hoefl	6,379	5,665	5,473
Interlochen	32,702	31,845	30,912
Leelanau	5,227	5,903	5,908
Ludington	47,755	48,907	47,326
Mears	16,147	16,371	17,257
Mitchell	27,167	27,296	26,445
Newaygo	3,619	3,331	4,035
Onaway	4,811	4,923	4,674
Orchard Beach	14,091	14,166	13,720
Otsego Lake	14,826	15,051	14,614
Petoskey	9,262	9,231	8,661
Pinconning	0	0	0
Rifle River	12,388	12,910	12,832

Silver Lake	19,749	19,689	18,721
Tawas Point	15,942	15,181	14,410
Traverse City	30,065	29,760	29,499
White Cloud	5	0	0
Wilderness	18,242	18,265	17,870
Wilson	10,638	10,752	10,368
Young	21,614	20,907	20,622
Region II Total	455,825	451,725	443,451
REGION III			
Algonac	22,311	23,845	26,170
Bald Mountain	71	68	56
Brighton	9,937	10,871	11,568
Cambridge	0	0	0
Dodge No. 4	0	0	0
Duck Lake	0	0	0
Fort Custer	4,384	6,593	4,843
Grand Haven	16,417	16,852	17,731
Hayes	14,492	14,715	14,282
Highland	1,675	2,009	3,108
Hoffmaster	29,370	30,454	29,856
Holland	33,790	34,583	34,667
Holly	8,806	9,787	10,102
Ionia	265	287	567
Island Lake	1,554	4,151	2,908
Lake Hudson	0	0	0
Lakeport	30,980	21,373	20,709
Maybury	49	91	48
Metamora-Hadley	16,568	17,029	16,481
Muskegon	24,164	24,440	24,807
Ortonville	2,097	1,268	1,230
Pinckney	17,564	18,634	17,661
Pontiac Lake	1,325	1,609	3,934
Port Crescent	17,041	17,057	16,806
Proud Lake	10,392	11,296	14,155
Rochester-Utica	2	4	3
Sanilac	0	0	0
Saugatuck	0	0	0
Seven Lakes	0	0	0
Sleeper	16,243	16,704	16,242
Sleepy Hollow	70	569	1,099
Sterling	14,676	13,247	15,157
Van Buren	15,383	15,673	21,688
Warren Dunes	20,757	20,889	21,417
Waterloo	27,248	27,345	25,279
Yankee Springs	23,659	24,840	26,046
Region III Total	381,290	386,283	398,620
State Grand Total	992,061	979,410	983,828

NOTE: Figures do not include overnight stays in cabins.

SOURCE: Michigan Department of Natural Resources, Parks Division.

Table 12-8. Estimated number of day-users visiting Michigan State Parks and Recreation Areas, 1977-1984.

State Park or Recreation Area	1977	1978	1979	1980	1981	1982	1983	1984
REGION I								
Baraga	25,945	16,457	16,534	9,369	10,203	9,831	6,945	7,232
Bewabic	24,902	28,613	24,315	24,893	26,041	26,693	27,082	23,293
Brimley	39,683	62,766	62,529	71,096	75,152	76,994	79,971	71,612
Fayette	94,717	96,171	73,996	75,771	75,453	70,174	73,280	74,583
Fort Wilkins	215,119	205,827	133,998	115,998	124,832	118,208	118,899	115,664
Indian Lake	18,755	21,316	24,072	26,837	21,575	17,014	15,923	15,559
Lake Gogebic	25,469	31,733	33,254	27,623	27,508	25,138	25,794	25,064
Mc Lain	116,373	140,935	107,180	126,167	120,363	118,871	157,231	128,703
Muskallonge Lake	22,604	18,603	13,845	17,519	17,296	15,923	16,433	14,003
Palms Book	70,950	69,831	56,386	63,803	62,494	58,969	57,504	57,749
Porcupine Mountains	203,891	227,365	187,493	200,022	229,567	239,302	250,093	263,934
Straits	123,963	184,766	139,676	75,237	49,920	52,231	56,930	57,132
Tahquamenon Falls	434,962	443,327	363,865	389,127	406,314	370,538	361,470	353,872
Twin Lakes	23,090	18,067	15,547	16,354	15,886	14,919	19,322	20,523
Van Riper	25,645	25,930	21,359	22,037	21,729	22,452	26,978	21,593
Wells	44,710	54,913	41,450	44,260	44,601	45,781	54,486	55,906
Region I Total	1,510,778	1,646,620	1,315,499	1,306,113	1,328,934	1,283,038	1,348,341	1,306,422
REGION II								
Aloha	112,255	108,848	95,080	110,521	102,671	95,721	94,605	61,354
Bay City	105,123	134,719	131,861	205,429	204,376	194,596	297,775	353,784
Burt Lake	58,740	66,415	46,075	49,645	51,075	47,735	54,730	52,180
Cheboygan	21,610	26,784	31,572	30,178	32,304	29,295	41,253	39,668
Clear Lake	46,666	49,698	37,540	33,202	30,155	30,701	32,665	31,530
Fishermans Island	0	22,571	18,188	18,776	41,411	41,779	40,495	33,248
Gladwin	30,240	40,888	35,211	35,468	30,803	27,281	0	0
Harrisville	21,104	23,847	23,841	24,305	25,047	22,800	23,859	24,144
Hartwick Pines	206,219	203,051	161,390	149,216	162,309	150,715	136,033	162,342
Hoefl	21,532	20,330	17,196	17,399	18,248	16,420	15,390	16,415
Interlochen	150,439	161,403	122,330	141,984	128,406	127,439	136,816	120,883
Leelanau	112,379	123,111	125,131	89,007	46,010	57,907	40,025	35,152
Ludington	503,857	552,921	502,805	516,538	488,769	496,013	578,757	555,385
Mears	283,188	297,471	271,717	275,245	240,359	240,270	259,799	252,470
Mitchell	57,051	52,254	42,945	58,618	76,463	107,199	224,865	227,960
Newaygo	7,997	10,228	12,710	7,986	10,039	7,187	8,679	10,640
North Higgins Lake	89,864	117,950	112,396	131,849	140,790	148,665	146,085	165,038
Onaway	56,166	57,541	42,223	43,668	24,001	19,897	22,595	19,210
Orchard Beach	24,111	18,101	14,994	13,887	14,672	15,010	14,021	21,278
Otsego Lake	107,230	111,089	110,360	131,097	135,570	117,376	102,582	77,752
Petoskey	131,163	203,042	198,937	181,385	120,870	139,664	178,575	183,313
Pinconning	0	0	0	42,230	81,891	68,504	0	0
Rifle River	36,966	41,601	37,014	35,851	37,008	38,319	39,202	43,880
Silver Lake	767,061	641,298	596,892	580,296	583,028	514,678	579,228	601,958
South Higgins Lake	206,771	194,202	103,147	107,372	150,696	149,164	213,797	161,935
Tawas Point	152,305	169,007	167,579	163,596	171,581	175,163	180,178	173,618

Traverse City	122,483	186,415	85,067	54,660	64,543	83,608	84,026	101,717
White Cloud	63,447	51,924	37,264	17,490	33,045	14,881	0	0
Wilderness	46,591	43,262	46,005	44,071	44,618	40,790	39,370	45,484
Wilson	55,358	67,708	52,221	59,085	53,444	44,108	56,129	36,300
Young	41,072	43,529	45,755	42,792	37,981	36,855	41,466	37,370
Region II Total	3,638,988	3,841,208	3,325,446	3,412,846	3,382,183	3,299,740	3,687,000	3,646,058

REGION III

Algonac	155,308	158,338	154,645	165,265	159,546	150,349	156,712	179,575
Bald Mountain	454,866	480,389	504,147	528,413	471,061	423,039	374,243	406,929
Brighton	202,799	201,204	191,176	166,843	181,570	165,567	197,160	175,367
Cambridge	38	0	0	0	0	0	0	0
Dodge No. 4	475,297	462,220	484,708	476,666	456,705	442,544	554,736	461,335
Duck Lake	49,603	52,482	68,309	74,250	64,737	74,819	99,095	98,400
Fort Custer	96,988	66,146	106,195	103,540	71,419	134,059	215,144	204,733
Grand Haven	681,771	686,605	522,097	509,215	587,187	618,007	756,235	796,040
Hayes	507,839	639,127	398,445	439,832	361,427	465,495	637,834	506,494
Highland	316,219	319,177	319,668	312,524	286,473	321,788	322,142	330,578
Hoffmaster	177,100	243,822	247,529	229,012	274,546	277,659	327,382	287,488
Holland	1,196,899	1,537,425	1,187,685	1,262,225	1,236,062	1,386,436	1,578,657	1,445,032
Holly	528,042	642,190	628,335	666,146	681,504	658,771	785,686	683,753
Ionia	59,656	51,801	69,219	59,520	68,055	66,456	29,374	40,752
Island Lake	274,069	302,280	415,667	328,398	368,679	344,070	515,529	472,608
Lake Hudson	0	0	4,724	34,627	24,137	27,351	79,880	121,032
Lakeport	156,530	188,234	132,481	157,487	123,037	93,194	125,589	117,005
Maybury	92,818	125,591	122,912	118,391	148,120	163,928	145,620	195,758
Metamora-Hadly	204,697	118,458	138,626	92,693	97,288	78,398	83,687	75,061
Muskegon	362,711	400,183	346,968	299,860	241,974	270,399	322,614	321,012
Ortonville	266,688	205,151	144,665	112,279	108,575	95,620	118,264	95,459
Pinckney	441,611	361,366	325,143	291,593	290,300	330,908	556,505	431,916
Pontiac Lake	377,925	376,925	399,722	269,250	190,972	178,797	244,562	255,029
Port Crescent	29,064	38,025	33,718	31,625	42,044	52,379	72,234	85,374
Proud Lake	327,635	355,444	284,734	208,982	223,181	225,499	270,177	261,180
Rochester-Utica	464,979	499,997	484,235	409,665	383,956	355,020	423,978	438,823
Sanilac	8,601	11,818	9,818	9,936	10,975	0	0	0
Saugatuck	0	0	11,714	24,365	30,902	39,280	34,810	31,361
Seven Lakes	75,658	159,172	172,929	104,442	91,724	98,874	141,804	117,742
Sleeper	89,003	96,958	104,415	131,722	107,720	118,612	122,160	140,264
Sleepy Hollow	197,819	203,594	184,092	165,678	212,024	217,009	176,490	209,929
Sterling	437,920	660,522	711,181	765,751	809,205	633,955	724,201	747,396
Van Buren	162,839	188,175	269,413	211,836	199,277	189,010	162,230	223,702
Warren Dunes	1,125,084	1,203,759	1,145,306	1,130,687	1,221,582	1,102,913	1,240,706	1,254,564
Waterloo	779,424	734,077	593,362	509,857	522,379	464,254	455,175	438,173
Yankee Springs	487,037	503,865	469,000	476,223	495,789	495,065	523,221	526,314
Region III Total	11,264,537	12,274,520	11,386,983	10,878,798	10,844,132	10,759,524	12,573,836	12,176,178
State Grand Total	16,414,303	17,762,348	16,027,928	15,597,757	15,555,249	15,342,302	17,609,177	17,128,658

Source: Michigan Department of Natural Resources, Parks Division.

Table 12-9. Estimated total number of persons visiting Michigan State Parks and Recreation Areas, 1977-1984.

State Park or Recreation Area	1977	1978	1979	1980	1981	1982	1983	1984
REGION I								
Baraga	68,371	55,535	42,492	33,009	35,695	34,420	33,601	33,680
Bewabic	57,426	60,975	49,383	52,091	49,681	50,404	51,865	47,461
Brimley	155,592	172,051	148,627	152,553	160,797	154,242	175,229	155,339
Fayette	135,254	134,664	101,167	102,731	105,260	98,594	101,168	99,229
Fort Wilkins	306,845	293,327	211,895	182,186	189,067	179,413	180,710	173,391
Indian Lake	135,977	131,588	104,108	105,983	100,099	98,522	96,589	92,675
Lake Gogebic	69,458	85,250	71,228	55,293	56,059	56,690	56,455	52,749
Mc Lain	169,280	195,427	152,966	171,223	168,170	163,425	205,924	172,086
Muskallonge Lake	79,016	71,004	54,332	61,715	64,748	62,912	66,260	61,184
Palms Book	70,950	69,831	56,386	63,803	62,494	58,969	57,504	57,746
Porcupine Mountains	343,545	365,698	305,083	328,727	362,557	362,033	353,504	355,172
Straits	293,424	357,435	285,582	216,613	202,448	211,406	218,248	208,185
Tahquamenon Falls	597,692	600,634	495,541	520,862	537,437	496,726	479,034	467,121
Twin Lakes	41,000	34,700	26,542	27,328	28,112	27,314	33,497	33,545
Van Riper	113,160	105,682	80,865	79,747	81,036	83,453	84,866	74,663
Wells	98,129	104,871	83,881	85,101	86,242	88,932	103,591	102,994
Region I Total	2,735,119	2,838,672	2,270,078	2,238,965	2,289,902	2,227,455	2,298,045	2,187,223
REGION II								
Aloha	214,300	211,839	190,302	202,894	199,842	195,426	191,536	159,873
Bay City	194,308	224,214	206,168	268,836	262,872	256,123	358,529	420,190
Burt Lake	197,733	218,160	174,232	174,793	177,645	175,155	186,204	166,881
Cheboygan	47,659	48,555	49,763	47,352	48,925	49,003	59,018	58,147
Clear Lake	93,142	91,907	74,061	65,487	61,715	61,959	63,126	62,550
Fishermans Island	0	40,601	35,288	36,064	63,037	71,532	72,200	63,230
Gladwin	47,686	56,035	51,339	49,555	43,587	39,890	0	0
Harrisville	118,477	120,229	109,658	112,782	110,576	117,255	117,151	110,918
Hartwick Pines	250,216	248,291	200,252	183,036	198,370	190,331	173,878	199,788
Hoelt	66,142	61,605	49,840	50,578	49,295	48,008	50,230	49,447
Interlochen	337,183	345,218	290,185	305,343	295,190	296,489	304,324	283,471
Leelanau	131,814	146,021	149,501	112,461	70,300	86,087	76,248	68,912
Ludington	762,822	810,252	761,972	769,017	745,724	762,607	846,230	819,838
Mears	359,331	375,024	348,554	350,636	318,455	320,578	339,282	334,544
Mitchell	217,973	205,262	185,379	194,401	216,928	246,984	365,116	368,019
Newaygo	36,623	39,650	40,049	31,234	31,291	20,486	27,239	29,855
North Higgins Lake	166,553	195,650	188,033	205,028	217,063	225,182	233,179	247,369
Onaway	92,422	91,253	72,300	69,067	50,173	46,402	47,742	44,234
Orchard Beach	108,858	103,566	91,281	85,080	86,951	95,419	95,587	102,237
Otsego Lake	209,698	211,868	204,188	219,781	225,524	205,628	190,782	157,989
Petoskey	189,107	261,159	252,914	235,457	173,420	191,148	229,662	234,720
Pinconning	0	0	0	42,230	81,891	68,504	0	0
Rifle River	104,328	110,542	106,968	107,444	110,668	110,820	108,940	114,472
Silver Lake	887,948	764,870	713,003	693,955	695,967	619,085	683,242	706,514
South Higgins Lake	405,569	395,792	299,050	293,630	340,301	332,019	396,889	343,712
Tawas Point	240,618	262,029	256,293	246,394	253,777	259,939	265,622	254,062

Traverse City	302,044	362,086	257,229	224,390	232,953	256,598	259,698	275,433
White Cloud	88,152	72,574	55,122	32,825	43,974	24,142	0	0
Wilderness	165,147	159,057	154,644	150,241	150,491	145,589	141,291	148,389
Wilson	128,008	137,261	102,852	103,973	107,235	101,345	116,958	91,699
Young	152,332	157,170	151,849	147,625	141,867	139,368	149,883	141,336
Region II Total	6,316,193	6,527,740	5,822,269	5,811,589	5,806,007	5,759,101	6,149,786	6,057,829

REGION III

Algonac	270,234	268,839	271,151	263,874	273,306	276,982	269,461	305,536
Bald Mountain	464,431	489,959	515,310	537,264	471,061	423,039	374,243	406,929
Brighton	271,955	277,103	261,388	235,466	244,036	228,665	253,877	237,681
Cambridge	38	0	0	0	0	0	0	0
Dodge No. 4	475,297	462,220	484,708	476,666	456,705	442,544	554,736	461,335
Duck Lake	49,603	52,482	68,309	74,250	64,737	74,819	99,095	98,400
Fort Custer	96,988	66,146	106,195	103,620	71,467	146,433	232,949	227,012
Grand Haven	754,033	761,250	597,383	582,214	667,111	696,205	836,359	879,477
Hayes	600,611	732,041	491,911	529,510	444,900	553,180	722,460	592,835
Highland	329,816	336,888	335,521	327,357	302,931	337,172	333,110	343,418
Hoffmaster	302,830	376,625	386,663	360,940	414,485	416,455	475,865	442,272
Holland	1,357,960	1,695,926	1,346,517	1,414,760	1,397,519	1,547,513	1,749,548	1,617,038
Holly	554,034	665,835	652,473	686,852	701,812	697,218	822,147	725,700
Ionia	59,845	52,092	70,188	60,587	69,963	68,192	30,267	41,848
Island Lake	291,608	315,901	426,606	340,280	381,941	354,970	525,665	489,825
Lake Hudson	0	0	4,724	34,627	24,137	27,351	79,880	121,032
Lakeport	284,676	317,349	244,771	275,811	241,339	216,003	252,837	238,538
Maybury	92,818	125,591	123,143	118,861	148,944	164,728	146,567	196,401
Metamora-Hadly	309,242	214,212	241,060	179,466	188,916	168,257	174,684	167,357
Muskegon	445,539	486,770	434,361	387,607	329,627	363,698	421,968	421,740
Ortonville	288,964	227,721	164,400	132,944	121,532	107,493	126,102	103,847
Pinckney	562,953	478,146	423,852	380,752	362,996	397,837	627,265	507,644
Pontiac Lake	383,848	382,342	405,175	273,776	197,330	180,554	250,064	261,683
Port Crescent	128,475	139,008	126,593	117,899	130,750	140,763	163,559	176,723
Proud Lake	390,130	424,782	355,279	269,062	270,410	287,157	324,374	322,781
Rochester-Utica	465,099	500,146	484,397	409,833	384,182	355,020	424,008	438,839
Sanilac	12,854	16,158	12,965	12,122	13,170	0	0	0
Saugatuck	0	0	11,714	24,365	30,902	39,280	34,810	31,361
Seven Lakes	75,658	159,172	172,929	104,442	91,724	98,874	141,804	117,742
Sleeper	183,415	185,891	193,758	222,974	205,534	215,686	215,302	238,110
Sleepy Hollow	199,342	204,828	185,076	166,407	213,246	217,901	177,296	212,880
Sterling	518,975	760,946	801,697	857,514	907,025	727,874	805,585	826,706
Van Buren	238,224	272,781	346,734	286,057	277,126	272,629	249,479	311,147
Warren Dunes	1,256,654	1,322,651	1,258,758	1,244,851	1,329,545	1,231,041	1,326,406	1,340,082
Waterloo	933,778	887,613	728,598	636,386	657,698	583,078	569,620	545,734
Yankee Springs	613,089	630,364	599,219	604,340	627,840	631,436	654,033	662,793
Region III Total	13,263,016	14,289,778	13,333,526	12,733,736	12,715,947	12,690,047	14,445,425	14,112,446
State Grand Total	22,314,328	23,656,190	21,425,873	20,784,290	20,811,856	20,676,603	22,893,256	22,357,498

NOTE: Total number of persons visiting a given park or area equals number of day-users plus number of campers.

SOURCE: Michigan Department of Natural Resources, Parks Division.

Table 12-10. Estimated number of campers visiting Michigan State Parks and Recreation Areas by month, 1984.

State Park or Recreation Area	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
REGION I													
Baraga	0	0	0	24	420	1,592	9,528	9,454	4,362	1,060	8	0	26,448
Bewabic	0	0	0	0	496	2,200	11,188	7,340	2,464	480	0	0	24,168
Brimley	16	60	0	124	1,934	6,628	31,609	30,692	11,136	1,424	72	32	83,727
Fayette	0	0	0	28	436	1,864	9,131	9,336	3,303	532	16	0	24,646
Fort Wilkins	0	0	0	0	663	4,297	19,767	21,581	9,593	1,826	0	0	57,727
Indian Lake	0	0	0	44	1,856	7,092	30,012	27,860	8,672	1,480	72	28	77,116
Lake Gogebic	0	0	0	0	860	3,338	10,792	8,389	3,834	472	0	0	27,685
Mc Lain	0	0	0	76	1,112	3,107	15,632	14,171	7,909	1,368	8	0	43,383
Muskallonge Lake	72	0	0	8	856	3,895	16,184	17,718	7,412	964	48	24	47,181
Palms Book	0	0	0	0	0	0	0	0	0	0	0	0	0
Porcupine Mountains	331	171	263	185	3,802	8,664	26,442	28,651	17,334	4,584	477	334	91,238
Straits	8	0	16	308	2,399	13,380	56,424	51,572	23,350	3,548	28	20	151,053
Tahquamenon Falls	8	0	0	112	2,481	8,410	37,979	40,458	19,449	4,168	184	0	113,249
Twin Lakes	0	0	0	0	136	1,144	6,187	4,105	1,262	188	0	0	13,022
Van Riper	0	0	0	0	1,756	6,252	21,164	16,598	6,274	1,006	20	0	53,070
Wells	0	0	0	492	1,773	5,187	16,724	15,133	6,427	1,092	256	4	47,088
Region I Total	435	231	279	1,401	20,980	77,050	318,763	303,058	132,781	24,192	1,189	442	880,801
REGION II													
Aloha	0	0	0	36	1,663	11,933	43,425	32,314	8,409	721	18	0	98,519
Bay City	280	352	196	689	4,495	8,082	19,545	17,377	10,728	2,843	955	864	66,406
Burt Lake	8	0	16	176	4,788	10,977	54,212	30,133	12,144	2,175	56	16	114,701
Cheboygan	0	0	0	0	436	1,302	7,545	6,012	2,711	473	0	0	18,479
Clear Lake	0	0	0	44	1,145	2,022	15,108	8,902	2,580	652	493	24	30,970
Fishermans Island	0	0	0	104	964	1,848	11,141	11,437	3,764	676	48	0	29,982
Gladwin	0	0	0	0	0	0	0	0	0	0	0	0	0
Harrisville	0	16	0	409	2,437	4,757	24,664	23,105	23,920	7,298	124	44	86,774
Hartwick Pines	360	152	56	504	2,318	4,432	10,253	8,913	6,496	3,189	633	140	37,446
Hoelt	0	8	16	72	709	2,449	12,566	11,448	4,529	1,071	164	0	33,032
Interlochen	0	0	0	128	4,011	12,597	72,518	56,293	14,934	2,099	8	0	162,588
Leelanau	0	0	0	140	1,040	3,616	10,644	10,584	6,012	1,712	12	0	33,760
Ludington	138	0	189	2,092	11,608	30,108	72,096	57,312	58,984	29,863	1,849	214	264,453
Mears	0	0	0	607	4,034	7,804	29,047	23,899	12,412	3,312	871	88	82,074
Mitchell	644	450	200	785	12,495	16,375	43,526	35,692	18,673	9,262	1,625	332	140,059
Nawaygo	0	0	0	0	2,426	2,045	7,426	4,133	3,177	0	0	8	19,215
North Higgins Lake	188	24	0	112	3,539	7,050	34,602	27,186	7,742	1,382	462	44	82,331
Onaway	0	0	0	24	931	2,639	9,602	7,160	3,764	728	176	0	25,024
Orchard Beach	0	0	0	627	2,167	4,270	26,858	28,333	13,841	4,448	415	0	80,959
Otsego Lake	0	0	0	43	3,957	7,097	33,725	25,505	8,079	1,694	137	0	80,237
Petoskey	466	207	154	596	2,554	6,625	15,857	12,876	8,601	2,959	214	298	51,407
Pinconning	0	0	0	0	0	0	0	0	0	0	0	0	0
Rifle River	44	28	36	845	4,381	8,299	21,953	17,149	9,308	5,262	3,011	276	70,592
Silver Lake	0	0	0	238	4,509	11,253	40,768	35,520	11,313	869	86	0	104,556
South Higgins Lake	24	104	12	260	5,711	14,447	79,372	61,764	16,824	2,854	392	13	181,777
Tawas Point	0	0	16	1,316	3,460	7,578	30,928	26,112	9,226	1,788	8	12	80,444

Traverse City	248	384	332	1,396	7,492	15,744	60,276	52,760	22,644	11,072	1,104	264	173,716
White Cloud	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilderness	12	16	32	339	3,193	12,117	37,565	32,050	14,592	2,517	440	32	102,905
Wilson	72	36	0	556	3,067	6,226	15,929	16,485	8,621	2,760	1,471	176	55,399
Young	40	12	12	92	4,989	6,883	44,287	36,585	8,973	1,929	124	40	103,966
Region II Total	2,524	1,789	1,267	12,230	104,519	230,575	885,438	717,039	333,001	105,608	14,896	2,885	2,411,771

REGION III

Algonac	112	96	40	2,744	8,751	17,117	34,592	25,448	24,758	10,091	1,919	293	125,961
Bald Mountain	0	0	0	0	0	0	0	0	0	0	0	0	0
Brighton	84	32	32	798	5,274	8,333	21,098	16,316	7,917	1,537	620	273	62,314
Cambridge	0	0	0	0	0	0	0	0	0	0	0	0	0
Dodge No. 4	0	0	0	0	0	0	0	0	0	0	0	0	0
Duck Lake	0	0	0	0	0	0	0	0	0	0	0	0	0
Fort Custer	0	12	0	227	1,885	3,641	7,859	4,354	3,278	844	179	0	22,279
Grand Haven	0	0	0	339	3,577	13,520	27,950	22,139	14,291	1,424	197	0	83,437
Hayes	86	36	32	1,013	4,957	13,193	29,376	22,875	11,283	3,049	393	48	86,341
Highland	78	122	24	452	1,248	1,614	3,046	2,624	2,040	811	429	352	12,840
Hoffmaster	48	124	109	1,855	8,755	20,292	53,991	45,714	19,703	3,845	296	52	154,784
Holland	0	24	0	364	14,261	30,030	60,275	48,593	16,323	1,865	271	0	172,006
Holly	158	148	103	821	3,532	6,660	12,972	10,069	5,622	1,478	233	151	41,947
Ionia	0	0	0	106	124	318	82	86	296	0	84	0	1,096
Island Lake	0	0	56	459	1,214	2,940	5,660	4,186	2,326	316	52	8	17,217
Lake Hudson	0	0	0	0	0	0	0	0	0	0	0	0	0
Lakeport	16	248	153	2,376	9,808	14,080	38,565	31,807	17,597	6,043	678	162	121,533
Maybury	0	0	12	42	129	108	166	0	99	0	87	0	643
Metamora-Hadly	60	101	64	1,972	7,272	14,057	28,857	22,302	11,752	5,113	654	92	92,296
Muskegon	0	16	8	204	4,861	8,393	37,178	34,633	14,010	1,397	28	0	100,728
Ortonville	8	8	8	233	1,102	1,240	2,434	1,768	1,192	367	28	0	8,388
Pinckney	52	82	163	1,233	5,729	10,778	25,671	19,234	9,781	2,491	356	158	75,728
Pontiac Lake	0	0	0	24	868	1,420	1,771	1,311	1,060	116	12	72	6,654
Port Crescent	20	8	8	1,385	5,166	12,472	29,855	24,939	13,186	3,858	440	12	91,349
Proud Lake	499	688	664	1,911	4,457	8,935	17,012	13,067	8,169	3,369	2,078	752	61,601
Rochester-Utica	0	0	0	0	0	0	0	8	0	8	0	0	16
Sanilac	0	0	0	0	0	0	0	0	0	0	0	0	0
Saugatuck	0	0	0	0	0	0	0	0	0	0	0	0	0
Seven Lakes	0	0	0	0	0	0	0	0	0	0	0	0	0
Sleeper	28	24	16	1,056	5,071	11,275	36,711	32,523	9,574	1,419	149	0	97,846
Sleepy Hollow	3	36	0	70	347	414	897	472	470	179	63	0	2,951
Sterling	544	526	586	1,559	5,944	14,197	27,024	15,180	9,993	2,221	721	815	79,310
Van Buren	204	148	204	1,413	4,954	12,234	28,980	24,917	10,967	3,191	225	8	87,445
Warren Dunes	44	41	78	758	5,080	11,143	27,850	24,881	11,509	3,634	385	115	85,518
Waterloo	148	168	212	1,176	7,888	14,196	37,788	28,228	13,080	3,376	1,081	220	107,561
Yankee Springs	126	68	48	1,722	9,540	21,309	46,537	34,089	16,720	5,573	699	48	136,479
Region III Total	2,318	2,756	2,620	26,312	131,794	273,909	644,197	511,763	256,996	67,615	12,357	3,631	1,936,268
State Grand Total	5,277	4,776	4,166	39,943	257,293	581,534	1,848,398	1,531,860	722,778	197,415	28,442	6,958	5,228,840

SOURCE: Michigan Department of Natural Resources, Parks Division.

Table 12-11. Estimated number of day-users visiting Michigan State Parks and Recreation Areas by month, 1984.

State Park or Recreation Area	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
REGION I													
Baraga	0	0	0	52	274	654	2,125	2,186	1,132	514	295	0	7,232
Bewabac	0	0	0	0	535	2,883	10,903	6,913	1,436	544	69	10	23,293
Brimley	442	390	332	700	2,672	8,029	32,509	20,534	4,090	958	516	440	71,612
Fayette	389	323	339	1,170	2,713	7,255	25,807	22,213	10,269	3,097	634	374	74,583
Fort Wilkins	108	35	42	373	3,500	9,455	34,056	35,095	22,086	9,310	1,107	497	115,664
Indian Lake	0	0	0	388	1,028	1,986	5,734	4,212	1,504	456	156	95	15,559
Lake Gogebic	132	33	39	16	962	2,589	9,329	7,797	3,013	795	308	51	25,064
Mc Lain	554	585	360	1,800	5,655	15,262	48,764	30,468	21,017	2,846	845	547	128,703
Muskallonge Lake	153	56	111	282	691	1,478	3,390	4,506	2,516	678	48	94	14,003
Palms Book	1,411	923	751	1,513	2,325	5,396	19,079	16,395	6,271	1,740	773	1,172	57,749
Porcupine Mountains	17,200	11,380	4,315	4,720	8,770	21,915	55,075	77,860	39,797	12,402	4,280	6,220	263,934
Straits	956	405	315	733	1,373	5,942	16,481	18,226	9,790	1,680	651	580	57,132
Tahquamenon Falls	5,213	5,319	5,263	7,100	13,512	38,256	90,247	94,789	58,716	26,773	4,409	4,275	353,872
Twin Lakes	212	120	109	43	135	1,695	9,474	4,936	3,128	428	0	243	20,523
Van Riper	0	0	0	0	501	2,612	10,458	6,397	1,442	183	0	0	21,593
Wells	604	334	575	3,790	3,686	5,683	15,019	13,091	7,484	3,471	1,497	672	55,906
Region I Total	27,374	19,903	12,551	22,680	48,332	131,090	388,450	365,618	193,691	65,875	15,588	15,270	1,306,422
REGION II													
Aloha	108	78	74	145	1,002	3,699	30,045	23,927	1,454	463	181	178	61,354
Bay City	1,565	2,046	1,946	3,893	5,383	24,636	143,434	79,596	41,496	21,973	14,333	13,483	353,784
Burt Lake	560	3,620	475	1,085	2,085	4,600	17,025	18,290	2,820	790	320	510	52,180
Cheboygan	2,772	876	476	1,018	1,092	3,107	15,968	9,743	2,287	787	804	738	39,668
Clear Lake	432	408	528	908	1,389	1,480	14,357	7,963	1,211	712	1,525	667	31,580
Fishermans Island	0	0	0	2,041	3,063	4,315	7,420	6,151	4,472	3,655	2,131	0	33,248
Gladwin	0	0	0	0	0	0	0	0	0	0	0	0	0
Harrisville	0	0	0	0	988	2,074	7,325	7,533	5,163	1,061	0	0	24,144
Hartwick Pines	5,573	2,752	1,656	3,684	8,975	20,318	42,740	38,380	22,093	11,602	3,567	1,002	162,342
Hoelt	469	320	432	753	1,306	1,871	4,379	3,264	1,933	956	436	296	16,415
Interlochen	214	132	116	220	1,958	11,500	54,253	43,652	8,185	553	72	28	120,883
Leelanau	1,278	796	783	880	592	959	9,964	11,794	3,834	2,678	848	746	35,152
Ludington	8,676	19,763	7,277	16,618	30,068	46,440	156,433	103,901	91,790	63,960	5,341	5,118	555,385
Mears	3,299	4,825	6,121	13,007	15,466	21,401	74,399	64,279	26,133	10,877	7,754	4,909	252,470
Mitchell	652	429	85	440	1,999	4,175	105,891	101,999	10,835	1,319	122	14	227,960
Newaygo	0	0	0	0	1,357	2,176	3,144	2,412	1,359	0	0	192	10,640
North Higgins Lake	10,579	4,399	1,069	1,667	4,999	11,100	63,212	51,713	9,598	3,252	2,022	1,428	165,038
Onaway	488	384	380	896	1,302	1,663	5,113	5,143	2,038	819	672	312	19,210
Orchard Beach	55	0	0	1,131	1,125	1,650	4,311	7,253	3,361	1,371	600	421	21,278
Otsego Lake	80	210	216	440	3,042	5,475	45,507	20,036	1,530	588	550	78	77,752
Petoskey	3,238	2,921	1,745	4,761	5,430	9,736	65,272	70,358	11,649	4,552	1,746	1,905	183,313
Pinconning	0	0	0	0	0	0	0	0	0	0	0	0	0
Rifle River	1,183	615	397	1,827	4,047	5,353	11,424	8,022	4,102	2,648	3,239	1,023	43,880
Silver Lake	2,120	1,560	1,570	4,811	36,915	50,065	233,075	183,640	72,580	10,627	3,570	1,425	601,958
South Higgins Lake	650	292	236	420	4,921	18,444	76,052	51,227	7,897	1,200	336	260	161,935
Tawas Point	4,259	4,961	6,152	10,147	11,062	15,653	42,635	34,067	23,462	9,566	6,874	4,780	173,618

Traverse City	594	1,361	573	1,175	1,850	7,228	44,041	35,028	6,127	2,474	824	442	101,717
White Cloud	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilderness	2,174	1,608	1,218	1,879	2,051	4,264	9,143	10,719	5,786	2,774	2,227	1,641	45,484
Wilson	445	80	91	1,144	1,513	3,677	14,204	10,741	2,326	1,020	707	352	36,300
Young	696	340	220	559	1,363	2,914	16,258	11,613	1,499	948	488	472	37,370
Region II Total	52,159	54,776	33,836	75,549	156,343	289,973	1,317,024	1,022,444	377,020	163,225	61,289	42,420	3,646,058

REGION III

Algonac	5,197	4,775	3,832	22,547	12,527	24,997	36,751	26,085	21,553	11,113	5,422	4,776	179,575
Bald Mountain	23,640	15,645	10,516	27,946	26,930	54,391	80,473	61,973	37,803	26,339	23,857	17,416	406,929
Brighton	6,931	5,744	4,974	7,680	7,928	26,203	46,871	31,785	14,833	7,879	7,258	7,281	175,367
Cambridge	0	0	0	0	0	0	0	0	0	0	0	0	0
Dodge No. 4	5,207	6,603	4,448	16,978	26,968	106,113	152,171	91,495	30,998	10,433	5,408	4,513	461,335
Duck Lake	1,820	1,601	2,150	4,320	5,510	9,205	34,830	25,547	5,977	2,969	1,878	2,593	98,400
Fort Custer	2,809	2,983	2,192	9,668	9,996	44,440	59,626	40,939	17,253	4,281	6,806	3,740	204,733
Grand Haven	17,620	14,500	15,530	37,650	26,990	94,865	241,915	191,465	70,095	30,110	25,770	29,530	796,040
Hayes	3,454	2,503	1,430	5,201	12,203	91,088	191,008	125,677	52,872	9,803	6,427	4,828	506,494
Highland	53,879	16,297	10,106	27,231	29,371	44,859	38,887	30,499	31,710	21,836	11,952	13,951	330,578
Hoffmaster	12,032	6,586	6,346	12,555	16,685	39,003	85,529	68,471	22,642	7,920	4,919	4,800	287,488
Holland	15,933	37,968	31,929	76,685	174,667	230,033	430,540	291,668	130,426	13,141	5,934	6,108	1,445,032
Holly	16,444	13,529	10,459	34,009	40,307	116,519	186,867	126,260	62,500	28,198	21,080	27,581	683,753
Ionia	1,124	575	758	2,471	2,212	2,692	2,862	2,061	5,190	8,399	8,438	3,970	40,752
Island Lake	13,315	7,955	7,845	16,995	23,800	84,479	163,250	101,865	21,279	10,600	11,700	9,525	472,608
Lake Hudson	1,492	1,178	1,019	2,491	3,543	18,178	30,291	23,092	15,576	8,647	9,913	5,612	121,032
Lakeport	2,475	3,526	2,705	7,088	8,992	10,371	33,244	25,676	12,683	4,944	2,769	2,532	117,005
Maybury	37,401	14,628	5,688	14,752	16,067	22,336	21,268	17,848	17,759	14,091	8,230	5,690	195,758
Metamora-Hadly	2,000	968	695	1,801	3,534	15,109	26,211	17,640	3,789	1,403	1,139	772	75,061
Muskegon	4,140	3,700	3,977	9,040	14,355	37,750	106,005	93,985	30,105	6,010	4,190	7,755	321,012
Ortonville	7,670	3,585	3,260	5,770	6,349	12,372	19,912	15,381	8,575	6,585	3,240	2,760	95,459
Pinckney	8,782	6,231	5,397	8,393	9,051	94,358	135,465	83,915	36,114	21,874	12,038	10,298	431,916
Pontiac Lake	15,735	6,725	6,149	12,425	15,820	24,000	63,255	39,135	29,460	16,485	13,100	12,740	255,029
Port Crescent	2,599	2,529	1,727	6,777	9,754	10,491	19,473	15,182	8,703	3,236	2,326	2,577	85,374
Proud Lake	17,927	8,984	6,733	24,885	19,851	31,459	48,173	40,098	22,861	16,126	14,358	9,725	261,180
Rochester-Utica	22,160	14,150	7,610	39,211	26,576	39,576	53,704	53,590	68,453	72,305	23,380	18,108	438,823
Sanilac	0	0	0	0	0	0	0	0	0	0	0	0	0
Saugatuck	2,225	1,476	971	1,754	1,929	3,636	6,932	5,124	3,199	1,527	1,225	1,363	31,361
Seven Lakes	2,521	1,424	1,211	5,283	6,762	24,766	36,422	22,866	8,796	3,951	2,063	1,677	117,742
Sleeper	3,355	1,235	971	1,965	5,406	11,706	54,530	47,692	7,683	2,605	1,777	1,339	140,264
Sleepy Hollow	20,061	7,730	2,620	12,141	21,203	38,167	44,261	28,625	19,954	10,280	3,099	1,788	209,929
Sterling	37,638	13,296	1,227	22,508	45,140	136,293	236,808	171,451	36,023	18,199	13,633	15,180	747,396
Van Buren	1,465	1,973	1,617	3,868	8,992	21,666	90,094	68,069	18,725	2,574	2,366	2,293	223,702
Warren Dunes	8,965	11,178	8,431	24,237	105,457	257,241	434,205	232,398	80,086	46,964	34,612	10,790	1,254,564
Waterloo	25,038	17,792	13,198	19,754	27,110	53,337	104,886	53,703	35,663	27,234	35,056	25,402	438,173
Yankee Springs	36,555	7,615	5,910	10,620	23,575	90,872	158,389	117,109	35,804	18,760	11,815	9,290	526,314
Region III Total	439,609	267,187	193,631	536,699	795,560	1,922,571	3,475,108	2,388,369	1,025,142	496,821	347,178	288,303	12,176,178
State Grand Total	519,142	341,866	240,018	634,928	1,000,235	2,343,634	5,180,582	3,776,431	1,595,853	725,921	424,055	345,993	17,128,658

SOURCE: Michigan Department of Natural Resources, Parks Division.

Table 12-12. Estimated total number of persons visiting Michigan State Parks and Recreation Areas by month, 1984.

State Park or Recreation Area	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
REGION I													
Baraga	0	0	0	76	694	2,246	11,653	11,640	5,494	1,574	303	0	33,680
Bewabic	0	0	0	0	1,031	5,083	22,091	14,253	3,900	1,024	69	10	47,461
Brimley	458	450	332	824	4,606	14,657	64,118	51,226	15,226	2,382	588	472	155,339
Fayette	389	323	339	1,198	3,149	9,119	34,938	31,549	13,572	3,629	650	374	99,229
Fort Wilkins	108	35	42	373	4,163	13,752	53,823	56,676	31,679	11,136	1,107	497	173,391
Indian Lake	0	0	0	432	2,884	9,078	35,746	32,072	10,176	1,936	228	123	92,675
Lake Gogebic	132	33	39	16	1,822	5,927	20,121	16,186	6,847	1,267	308	51	52,749
Mc Lain	554	585	360	1,876	6,767	18,369	64,396	44,639	28,926	4,214	853	547	172,086
Muskellonge Lake	225	56	111	290	1,547	5,373	19,574	22,224	9,928	1,642	96	118	61,184
Palms Book	1,411	923	751	1,513	2,325	5,396	19,079	16,395	6,271	1,740	773	1,172	57,749
Porcupine Mountains	17,531	11,551	4,578	4,905	12,572	30,579	81,517	106,511	57,131	16,986	4,757	6,554	355,172
Straits	964	405	331	1,041	3,772	19,322	72,905	69,798	33,140	5,228	679	600	208,185
Tahquamenon Falls	5,221	5,319	5,263	7,212	15,993	46,666	128,226	135,247	78,165	30,941	4,593	4,275	467,121
Twin Lakes	212	120	109	43	271	2,839	15,661	9,041	4,390	616	0	243	33,545
Van Riper	0	0	0	0	2,257	8,864	31,622	22,995	7,716	1,189	20	0	74,663
Wells	604	334	575	4,282	5,459	10,870	31,743	28,224	13,911	4,563	1,753	676	102,994
Region I Total	27,809	20,134	12,830	24,081	69,312	208,140	707,213	668,676	326,472	90,067	16,777	15,712	2,187,223
REGION II													
Aloha	108	78	74	181	2,665	15,632	73,470	56,241	9,863	1,184	199	178	159,873
Bay City	1,845	2,398	2,142	4,582	9,878	12,718	162,979	96,973	52,224	24,816	15,288	14,347	420,190
Burt Lake	568	3,620	491	1,261	6,873	15,577	71,237	48,423	14,964	2,965	376	526	166,881
Cheboygan	2,772	876	476	1,018	1,528	4,409	23,513	15,755	4,998	1,260	804	738	58,147
Clear Lake	432	408	528	952	2,534	3,502	29,465	16,865	3,791	1,364	2,018	691	62,550
Fishermans Island	0	0	0	2,145	4,027	6,163	18,561	17,588	8,236	4,331	2,179	0	63,230
Gladwin	0	0	0	0	0	0	0	0	0	0	0	0	0
Harrisville	0	16	0	409	3,425	6,831	31,989	30,638	29,083	8,359	124	44	110,918
Hartwick Pines	5,933	2,904	1,712	4,188	11,293	24,750	52,993	47,293	28,589	14,791	4,200	1,142	199,788
Hoelt	469	328	448	825	2,015	4,320	16,945	14,712	6,462	2,027	600	296	49,447
Interlochen	214	132	116	348	5,969	24,097	126,771	99,945	23,119	2,652	80	28	283,471
Leelanau	1,278	796	783	1,020	1,632	4,575	20,608	22,378	9,846	4,390	860	746	68,912
Ludington	8,814	19,763	7,466	18,710	41,676	76,548	228,529	161,213	150,774	93,823	7,190	5,332	819,838
Mears	3,299	4,825	6,121	13,614	19,500	29,205	103,446	88,178	38,545	14,189	8,625	4,997	334,544
Mitchell	1,296	879	285	1,225	14,494	20,550	149,417	137,691	29,508	10,581	1,747	346	368,019
Nawaygo	0	0	0	0	3,783	4,221	10,570	6,545	4,536	0	0	200	29,855
North Higgins Lake	10,767	4,423	1,069	1,779	8,538	18,150	97,814	78,899	17,340	4,634	2,484	1,472	247,369
Onaway	488	384	380	920	2,233	4,302	14,715	12,303	5,802	1,547	848	312	44,234
Orchard Beach	55	0	0	1,758	3,292	5,920	31,169	35,586	17,202	5,819	1,015	421	102,237
Otsego Lake	80	210	216	483	6,999	12,572	79,232	45,541	9,609	2,282	687	78	157,989
Petoskey	3,704	3,128	1,899	5,357	7,984	16,361	81,129	83,234	20,250	7,511	1,960	2,203	234,720
Pinconning	0	0	0	0	0	0	0	0	0	0	0	0	0
Rifle River	1,227	643	433	2,672	8,428	13,652	33,377	25,171	13,410	7,910	6,250	1,299	114,472
Silver Lake	2,120	1,560	1,570	5,049	41,424	61,318	273,843	219,160	83,893	11,496	3,656	1,425	706,514
South Higgins Lake	674	396	248	680	10,632	32,891	155,424	112,991	24,721	4,054	728	273	343,712
Tawas Point	4,259	4,961	6,168	11,463	14,522	23,231	73,563	60,179	32,688	11,354	6,882	4,792	254,062

Traverse City	842	1,745	905	2,571	9,342	22,972	104,317	87,788	28,771	13,546	1,928	706	275,433
White Cloud	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilderness	2,186	1,624	1,250	2,218	5,244	16,381	46,708	42,769	20,378	5,291	2,667	1,673	148,389
Wilson	517	116	91	1,700	4,580	9,903	30,133	27,226	10,947	3,780	2,178	528	91,699
Young	736	352	232	651	6,352	9,797	60,545	48,198	10,472	2,877	612	512	141,336
Region II Total	54,683	56,565	35,103	87,779	260,862	520,548	2,202,462	1,739,483	710,021	268,833	76,185	45,305	6,057,829

REGION III

Algonac	5,309	4,871	3,872	25,291	21,278	42,114	71,343	51,533	46,311	21,204	7,341	5,069	305,536
Bald Mountain	23,640	15,645	10,516	27,946	26,930	54,391	80,473	61,973	37,803	26,339	23,857	17,416	406,929
Brighton	7,015	5,776	5,006	8,478	13,202	34,536	67,969	48,101	22,750	9,416	7,878	7,554	237,681
Cambridge	0	0	0	0	0	0	0	0	0	0	0	0	0
Dodge No. 4	5,207	6,603	4,448	16,978	26,968	106,113	152,171	91,495	30,998	10,433	5,408	4,513	461,335
Duck Lake	1,820	1,601	2,150	4,320	5,510	9,205	34,830	25,547	5,977	2,969	1,878	2,593	98,400
Fort Custer	2,809	2,995	2,192	9,895	11,881	48,081	67,485	45,293	20,531	5,125	6,985	3,740	227,012
Grand Haven	17,620	14,500	15,530	37,989	30,567	108,385	269,865	213,604	84,386	31,534	25,967	29,530	879,477
Hayes	3,540	2,539	1,462	6,214	17,160	104,281	220,384	148,552	64,155	12,852	6,820	4,876	592,835
Highland	53,957	16,419	10,130	27,683	30,619	46,473	41,933	33,123	33,750	22,647	12,381	14,303	343,418
Hoffmaster	12,080	6,710	6,455	14,410	25,440	59,295	139,520	114,185	42,345	11,765	5,215	4,852	442,272
Holland	15,933	37,992	31,929	77,049	188,928	260,063	490,185	340,261	146,749	15,006	6,205	6,108	1,617,038
Holly	16,602	13,677	10,562	34,830	43,839	123,179	199,839	136,329	68,122	29,676	21,313	27,732	725,700
Ionia	1,124	575	758	2,577	2,336	3,010	2,944	2,147	5,486	8,399	8,522	3,970	41,848
Island Lake	13,315	7,955	7,901	17,454	25,014	87,419	168,910	106,051	23,605	10,916	11,752	9,533	489,825
Lake Hudson	1,492	1,178	1,019	2,491	3,543	18,178	30,291	23,092	15,576	8,647	9,913	5,612	121,032
Lakeport	2,491	3,774	2,858	9,464	18,800	24,451	71,809	57,483	30,280	10,987	3,447	2,694	238,538
Maybury	37,401	14,628	5,700	14,794	16,196	22,444	21,434	17,848	17,858	14,091	8,317	5,690	196,401
Metamora-Hadly	2,060	1,069	759	3,773	10,806	29,166	55,068	39,942	15,541	6,516	1,793	864	167,357
Muskegon	4,140	3,716	3,985	9,244	19,216	46,143	143,183	128,618	44,115	7,407	4,218	7,755	421,740
Ortonville	7,678	3,593	3,268	6,003	7,451	13,612	22,346	17,149	9,767	6,952	3,268	2,760	103,847
Pinckney	8,834	6,313	5,560	9,626	14,780	105,136	161,136	103,149	45,895	24,365	12,394	10,456	507,644
Pontiac Lake	15,735	6,725	6,149	12,449	16,688	25,420	65,026	40,446	30,520	16,601	13,112	12,812	261,683
Port Crescent	2,619	2,537	1,735	8,162	14,920	22,963	49,328	40,121	21,889	7,094	2,766	2,589	176,723
Proud Lake	18,426	9,672	7,397	26,796	24,308	40,394	65,185	53,165	31,030	19,495	16,436	10,477	322,781
Rochester-Utica	22,160	14,150	7,610	39,211	26,576	39,576	53,704	53,598	68,453	72,313	23,380	18,108	438,839
Sanilac	0	0	0	0	0	0	0	0	0	0	0	0	0
Saugatuck	2,225	1,476	971	1,754	1,929	3,636	6,932	5,124	3,199	1,527	1,225	1,363	31,361
Seven Lakes	2,521	1,424	1,211	5,283	6,762	24,766	36,422	22,866	8,796	3,951	2,063	1,677	117,742
Sleeper	3,383	1,259	987	3,021	10,477	22,981	91,241	80,215	17,257	4,024	1,926	1,339	238,110
Sleepy Hollow	20,064	7,766	2,620	12,211	21,550	38,581	45,158	29,097	20,424	10,459	3,162	1,788	212,880
Sterling	38,182	13,822	1,813	24,067	51,084	150,490	263,832	186,631	46,016	20,420	14,354	15,995	826,706
Van Buren	1,669	2,121	1,821	5,281	13,946	33,900	119,074	92,986	29,692	5,765	2,591	2,301	311,147
Warren Dunes	9,009	11,219	8,509	24,995	110,537	268,384	462,055	257,279	91,595	50,598	34,997	10,905	1,340,082
Waterloo	25,186	17,960	13,410	20,930	34,998	67,533	142,674	81,931	48,743	30,610	36,137	25,622	545,734
Yankee Springs	36,681	7,683	5,958	12,342	33,115	112,181	204,926	151,198	52,524	24,333	12,514	9,338	662,793
Region III Total	441,927	269,943	196,251	563,011	927,354	2,196,480	4,119,305	2,900,132	1,282,138	564,436	359,535	291,934	14,112,466
State Grand Total	524,419	346,642	244,184	674,871	1,257,528	2,925,168	7,028,980	5,308,291	2,318,631	923,336	452,497	352,951	22,357,498

NOTE: Total number of persons visiting a given park or area equals number of day-users plus number of campers.

Table 12-13. Number of camping permits issued at Michigan State Parks and Recreation Areas by month, 1984.

State Park or Recreation Area	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
REGION I													
Baraga	0	0	0	3	45	161	1,002	970	454	133	1	0	2,769
Bewabic	0	0	0	1	57	238	979	682	249	56	0	0	2,262
Brimley	2	5	0	14	180	684	2,983	3,011	1,036	148	9	4	8,076
Fayette	1	1	1	5	57	225	1,020	982	343	59	1	0	2,695
Fort Wilkins	0	0	0	0	87	494	2,011	2,117	975	191	0	0	5,875
Indian Lake	0	0	0	5	180	733	2,994	2,693	915	173	5	2	7,700
Lake Gogebic	0	0	0	0	83	300	993	788	383	44	0	0	2,591
Mc Lain	0	0	0	8	130	320	1,380	1,277	759	139	1	0	4,014
Muskallonge Lake	6	0	0	1	89	362	1,423	1,469	660	97	4	1	4,112
Palm Book	0	0	0	0	0	0	0	0	0	0	0	0	0
Porcupine Mountains	20	10	22	19	342	778	2,951	3,066	1,600	370	23	20	9,221
Straits	1	1	2	33	286	1,477	5,852	5,222	2,197	401	3	2	15,477
Tahquamenon Falls	2	0	0	15	289	905	4,159	4,361	1,966	521	9	0	12,227
Twin Lakes	0	0	0	1	21	121	528	376	139	25	1	1	1,213
Van Riper	0	0	0	0	183	589	1,967	1,523	636	99	1	0	4,998
Wells	0	0	0	44	179	512	1,659	1,485	599	108	18	1	4,605
Region I Total	32	17	25	149	2,208	7,899	31,901	30,022	12,911	2,564	76	31	87,835
REGION II													
Aloha	0	0	0	3	133	736	1,772	1,602	426	64	2	0	4,738
Bay City	10	21	10	65	419	732	1,863	1,705	911	250	75	73	6,134
Burt Lake	1	0	2	18	569	1,144	3,516	2,894	849	210	6	2	9,211
Cheboygan	0	0	0	0	51	117	676	555	238	46	0	0	1,683
Clear Lake	0	0	3	13	113	167	1,009	651	190	63	37	1	2,247
Fishermans Island	0	0	0	12	104	174	908	1,014	311	73	3	0	2,599
Gladwin	0	0	0	0	0	0	0	0	0	0	0	0	0
Harrisville	0	1	0	34	244	397	1,899	1,801	1,616	551	9	2	6,554
Hartwick Pines	31	25	14	75	220	490	1,112	935	663	324	43	11	3,943
Hoeft	0	1	1	7	76	217	1,110	944	417	103	13	0	2,889
Interlochen	0	0	0	16	318	998	4,559	3,768	1,077	194	1	0	10,931
Leelanau	0	0	0	12	97	271	810	754	407	133	1	0	2,485
Ludington	10	0	17	178	894	2,043	3,236	2,333	3,186	1,610	124	21	13,652
Mears	0	0	0	56	392	599	1,345	949	675	269	48	1	4,334
Mitchell	57	44	18	65	933	1,273	2,373	2,184	1,142	836	108	32	9,065
Newaygo	0	0	0	0	173	213	604	356	233	0	0	1	1,580
North Higgins Lake	20	23	21	97	387	897	2,131	1,484	526	125	32	4	5,747
Onaway	0	0	0	3	85	183	748	520	251	57	10	0	1,857
Orchard Beach	0	0	0	56	234	388	2,472	2,052	1,185	373	37	0	6,797
Otsego Lake	0	0	0	4	326	521	1,656	1,276	531	138	6	0	4,458
Petoskey	47	26	18	59	223	602	975	749	778	320	16	30	3,843
Pinconning	0	0	0	0	0	0	0	0	0	0	0	0	0
Rifle River	3	3	3	76	392	637	1,598	1,392	671	408	174	19	5,376
Silver Lake	0	0	0	25	330	781	2,149	2,075	765	114	10	0	6,249
South Higgins Lake	3	11	2	28	489	1,218	4,404	3,848	1,279	289	34	5	11,610
Tawas Point	0	0	2	124	325	618	2,129	1,797	636	185	1	2	5,819

Traverse City	11	26	21	119	598	1,277	3,363	3,344	1,647	1,064	93	22	11,585
White Cloud	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilderness	1	2	4	36	332	1,070	3,042	2,545	1,204	267	33	3	8,539
Wilson	8	6	2	58	247	540	1,225	1,028	451	257	113	11	3,946
Young	4	1	1	11	381	498	1,734	1,540	528	169	7	7	4,881
Region II Total	206	190	139	1,250	9,085	18,801	54,418	46,095	22,793	8,492	1,036	247	162,752

REGION III

Algonac	7	6	2	268	598	1,286	2,168	1,608	1,439	753	154	18	8,307
Bald Mountain	1	2	1	4	3	3	1	0	3	3	3	1	25
Brighton	12	4	4	67	444	678	1,687	1,294	544	136	36	14	4,920
Cambridge	0	0	0	0	0	0	0	0	0	0	0	0	0
Dodge No. 4	0	0	0	0	0	0	0	0	0	0	0	0	0
Duck Lake	0	0	0	0	0	0	0	0	0	0	0	0	0
Fort Custer	0	1	0	21	179	458	522	412	244	52	10	0	1,899
Grand Haven	0	0	0	61	184	592	844	647	642	124	17	0	3,111
Hayes	9	3	3	90	322	942	1,701	1,390	702	279	34	4	5,479
Highland	3	6	1	40	117	161	270	238	164	63	21	11	1,095
Hoffmaster	5	11	13	166	822	1,540	3,624	2,863	1,225	321	31	7	10,628
Holland	0	3	0	38	1,147	1,856	3,078	2,810	974	163	16	0	10,085
Holly	2	7	6	69	296	528	1,136	891	417	69	18	7	3,446
Ionia	0	0	0	8	14	16	8	10	29	0	2	0	87
Island Lake	0	0	5	36	116	247	517	348	197	15	4	1	1,486
Lake Hudson	0	0	0	0	0	0	0	0	0	0	0	0	0
Lakeport	1	24	14	227	782	1,156	3,119	2,614	1,265	516	61	16	9,795
Maybury	0	0	1	1	3	2	3	0	3	0	2	0	15
Metamora-Hadly	7	12	7	188	498	1,000	1,847	1,498	779	415	55	6	6,312
Muskegon	0	2	1	38	353	812	2,515	2,574	961	190	4	0	7,450
Ortonville	0	1	1	23	97	113	246	144	92	35	3	0	755
Pinckney	8	8	9	116	363	840	1,775	1,399	680	204	30	8	5,440
Pontiac Lake	0	0	0	1	99	108	174	132	111	8	1	1	635
Port Crescent	3	3	1	126	419	990	1,673	1,507	877	337	34	1	5,971
Proud Lake	22	53	38	157	367	726	1,330	1,008	620	269	143	34	4,767
Rochester-Utica	0	0	0	0	0	0	0	1	0	1	0	0	2
Sanilac	0	0	0	0	0	0	0	0	0	0	0	0	0
Saugatuck	0	0	0	0	0	0	0	0	0	0	0	0	0
Seven Lakes	0	0	0	0	0	0	0	0	0	0	0	0	0
Sleeper	3	3	1	97	440	883	2,571	2,090	619	127	13	0	6,847
Sleepy Hollow	0	2	0	5	16	28	90	59	56	18	7	0	281
Sterling	23	28	25	105	477	1,053	2,030	1,221	725	156	43	30	5,916
Van Buren	6	7	10	120	507	1,126	2,308	1,997	868	226	15	2	7,192
Warren Dunes	5	6	11	122	674	1,643	3,447	3,181	1,765	390	35	10	11,289
Waterloo	5	11	10	160	478	1,487	3,020	2,547	891	433	115	14	9,171
Yankee Springs	13	7	5	155	720	1,496	2,468	2,085	1,037	432	55	4	8,477
Region III Total	135	210	169	2,509	10,535	21,770	44,172	36,568	17,929	5,735	962	189	140,883
State Grand Total	373	417	333	3,908	21,828	48,470	130,491	112,685	53,633	16,791	2,074	467	391,470

NOTE: Data include camping permits issued to camping parties using backcountry, organization, and horseman's campsites.

SOURCE: Michigan Department of Natural Resources, Parks Division.

Table 12-14. Summer occupancy rates of campgrounds in selected Michigan State Parks and Recreation Areas¹

State Park or Recreation Area	TOTAL NO. MODERN & RUSTIC CAMPSITES					SUMMER OCCUPANCY RATES ²				
	1979	1981	1983	1984	1985	6/11-9/2 1979	6/15-9/6 1981	6/13-9/4 1983	6/11-9/2 1984	6/10-9/1 1985
Baraga	137	137	137	137	137	28.9	26.0	28.1	27.0	24.1
Bewabic	144	144	144	144	144	28.7	26.9	30.6	27.8	31.0
Fayette	80	80	80	80	80	47.3	49.4	53.2	44.7	45.6
Indian Lake	300	300	301	301	301	47.3	44.7	45.4	43.2	43.6
Lake Gogebic	165	165	165	165	165	38.6	30.5	31.1	28.1	24.6
Muskallonge Lake	179	179	179	179	179	43.6	50.7	53.4	50.6	53.9
Twin Lakes	62	62	62	62	62	31.3	34.4	40.1	37.3	38.6
J. W. Wells	155	155	155	162	162	39.5	36.5	48.0	43.4	40.7
Aloha	287	287	287	287	287	71.3	72.8	74.3	76.2	72.4
Mears	179	179	179	179	180	87.1	90.4	89.0	88.8	89.3
Mitchell	270	270	270	270	270	86.0	86.6	88.0	88.3	84.1
Newaygo	99	99	100	99	99	37.7	33.8	29.8	30.0	39.0
Onaway	101	101	101	103	103	N.A.	N.A.	43.8	45.6	42.4
Orchard Beach	175	175	175	175	175	65.6	69.3	76.2	77.2	72.1
Grand Haven	170	170	170	170	170	88.9	93.5	97.2	97.4	98.9
W.J. Hayes	212	212	212	212	212	64.5	58.6	61.6	64.4	59.2
Hoffmaster	333	333	333	333	333	75.9	76.3	81.3	85.1	80.6
Holland	342	342	356	368	368	86.5	85.7	94.0	93.3	92.6
Metamora-Hadley	211	211	211	220	220	N.A.	N.A.	N.A.	67.1	63.0
Sleeper	270	270	270	280	280	57.4	60.7	60.3	61.0	57.8

¹Figures are presented only for those state parks and recreation areas that do not provide camping in horseman's campgrounds, organization campgrounds, or backcountry.

²These occupancy rates are for 84-day seasons, each beginning in mid-June and ending the Sunday before Labor Day. Variations in occupancy rates over time may be due to changes in the number of campsites at a given park or recreation area. Occupancy rates were calculated as follows:

$$\text{Occupancy}_{ij} = \frac{\text{Number of overnight stays in 84-day season}_{ij}}{\text{Number of modern and rustic campsites}_{ij} \times 84} \times 100$$

where i = State Park or Recreation Area
 j = Year

SOURCE: Michigan Department of Natural Resources, Parks Division.

Table 12-15. Attendance at attractions operated by the Mackinac Island State Park Commission, 1983-1985.

ATTRACTION	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	MAY- OCTOBER TOTAL	JULY- AUGUST TOTAL
<u>The Sloop Welcome</u> ¹								
1983	Not open	4,858	14,125	17,512	1,753	Not open	38,248	31,637
1984	Not open	3,459	14,414	17,703	813	Not open	36,389	32,117
1985	Not open	5,204	13,744	17,839	1,458	Not open	38,245	31,583
<u>Fort Mackinac</u> ²								
1983	3,991	25,304	57,294	64,360	16,429	3,823	171,201	121,654
1984	6,779	28,591	66,274	69,615	15,558	3,353	190,170	135,889
1985	6,800	29,374	64,322	70,084	14,482	3,774	188,836	134,406
<u>Fort Michilimackinac</u> ²								
1983	4,830	19,338	43,593	45,049	12,404	4,227	129,441	88,642
1984	6,593	21,693	50,270	51,035	11,174	3,619	144,384	101,305
1985	7,755	21,751	46,953	49,206	10,832	3,984	140,481	96,159
<u>Old Mill Creek State Park</u> ³								
1983	Not open	Not open	Not open	Not open	Not open	Not open	---	---
1984	Not open	10,446	26,455	27,070	7,799	2,778	74,548	53,525
1985	3,560	11,012	23,311	25,837	7,619	2,923	74,262	49,148

¹Operated from mid-June to Labor Day each year.

²Operated from mid-May to mid-October each year.

³Opened June 15, 1984. 1984 season ended in mid-October. Operated from mid-May to mid-October in 1985.

SOURCE: Mackinac Island State Park Commission.

CHAPTER 13

CAMPING IN MICHIGAN

Charles M. Nelson

Introduction

Camping in Michigan is important as a recreation activity, as a base for other recreation activities, and as a type of lodging. The 1981 National Family Opinion Travel and Tourism Study estimated that 15.9% of the overnight trips in Michigan involved camping (Michigan Dept. of Commerce, 1985). This estimate suggests that about 4.5 million camping party-nights occurred in Michigan in 1981. A 1980 study by the Michigan Department of Transportation (1985) found that 25.5% of the travelers who completed a questionnaire at a Michigan Travel Information Center in 1980 camped during their trip.

In terms of lodging during the summer, campsites may provide more lodging opportunities than motel, hotel, cabin, and cottage rentals in Michigan. A 1982-83 study estimated conservatively that there were 79,000 rental units housed in approximately 3,400 facilities in Michigan in 1983 (Michigan Dept. of Commerce, 1983). Information from the Michigan Department of Public Health and state and federal campground providers indicates that there are over 90,000 designated campsites in Michigan.

This chapter presents an overview of the growth and character of Michigan's camping industry, concentrating on developments within the past 5 years. It discusses campground supply, use, and pricing, recreational vehicle shipments to Michigan, and camper characteristics. This chapter does not provide information on dispersed camping, i.e., camping in areas not specifically designated as a campground.

Campground Supply

The supply of designated campgrounds in Michigan provides travelers with a wide range of camping opportunities. In the private sector, camping is provided by commercial campgrounds and by groups/associations such as non-profit fraternal or religious organizations. Both of these providers have all designated sites licensed by the Michigan Department of Public Health (DPH). The DPH also licenses all designated sites provided by local units of government, including townships, villages, cities, and counties. State campgrounds are operated by the Michigan Department of Natural Resources (DNR) through developed state parks and more rustic state forest campgrounds. Finally, the federal government provides camping in national parks and national forests. In 1985, there were 92,803 designated campsites in Michigan (Table 13-1).

Commercial campgrounds offer by far the largest number of sites. State parks and local public campgrounds are the next two largest providers. The importance of local public campgrounds in the campground supply is somewhat surprising considering their lack of publicity compared to a well-known system such as Michigan state parks. Group, non-profit campgrounds are not open to the public yet provide an important substitute for many campers who might otherwise use public or commercial campgrounds.

The regional supply of campsites in Michigan in 1985 is shown in Table 13-2, where Region I is the Upper Peninsula, Region II is the Lower Peninsula north of the

Bay City to Muskegon line, and Region III is the Lower Peninsula south of the aforementioned line (Figure 1-1).

Table 13-1. Supply of campgrounds and campsites in Michigan by provider, 1985.

Provider	Number of Campgrounds	Number of Campsites	Mean sites/campground	% of total sites
Commercial (a)	754	54,645	72.5	58.9
State park (b)	69 ^a	14,422	209.0	15.5
Local public (a)	158	13,645	86.4	14.7
Group, non-profit (a)	70	4,750	67.9	5.1
State forest (c)	149	3,200	21.5	3.4
Nat. forest (d)	72	1,864	25.9	2.0
National park (e)	7	277	39.6	0.3
Total	1,279	92,803	72.6	N.A.

^a69 state parks offer camping although some state parks have more than 1 campground.

SOURCES: (a) Michigan Department of Public Health "Licensed and Proposed Campgrounds in Michigan 1985"; (b) Michigan DNR Parks Division "Michigan State Parks Campsite Data 1985"; (c) Personal communication Dean Sandell, Forest Management Division, DNR; (d) US Forest Service RIM computer printout, 1985; (e) National Park Service, Camping in the National Parks (1985).

Table 13-2. Supply of designated campgrounds and campsites in Michigan by region, 1985.

Provider	REGION I			REGION II			REGION III		
	No. camp-sites	No. camp-grounds	Mean sites/cmpgnd.	No. camp-sites	No. camp-grounds	Mean sites/cmpgnd.	No. camp-sites	No. camp-grounds	Mean sites/cmpgnd.
Commercial	3,000	76	39.5	17,388	286	60.8	34,257	392	87.4
State park ^a	2,857	16	178.6	6,241	28	222.9	5,214	25	208.6
Local gov.	1,680	36	46.7	5,395	70	77.1	6,570	52	122.7
Group	83	5	16.6	1,962	29	67.6	2,705	36	74.8
St. forest	1,109	65	17.1	2,091	84	24.9	0	0	0.0
Nat. forest	1,169	43	27.2	717	29	24.7	0	0	0.0
Nat. park	47	6	7.8	230	2	115.0	0	0	0.0
Total	9,945	247	40.3	34,024	528	64.4	48,856	505	96.7

^a69 state parks offer camping although some state parks have more than 1 campground.

SOURCES: Same as Table 13-1.

Campsites are most numerous in Region III, while the largest number of campgrounds is in Region II. Also, as one goes from north to south in Michigan the importance of the private sector in the supply of campgrounds becomes more pronounced. Whereas the private sector provides less than 1/3 of the campsites in Region I, it provides over 3/4 of the sites in Region III. Campground size also increases going from north to south, more than doubling from Region I to Region III.

In 1977, the DNR (1979) estimated that there were 78,505 campsites in Michigan. DPH figures on licensed campgrounds and figures obtained from state and federal campground providers indicate that the supply of campsites over the past 5 years has sharply increased (Table 13-3). This has been due primarily to an increase in local public and private (commercial and group) campgrounds.

Table 13-3. Supply of state/federal public versus local public and private campgrounds and campsites in Michigan, 1980-85.

Year	PRIVATE AND LOCAL PUBLIC (a)			STATE AND FEDERAL PUBLIC (b)		
	No. campgrounds	No. campsites	Mean sites/campground	No. campgrounds	No. campsites	Mean sites/campground
1980	836	57,048	68.2	321	19,475	60.7
1981	894	63,437	71.0	321	19,559	60.9
1982	900	65,984	73.3	321	19,575	61.0
1983	933	67,872	72.7	301	19,424	64.5
1984	951	71,425	75.1	302	19,687	65.2
1985	982	73,040	74.4	298	19,763	66.3

SOURCES: (a) Personal communication Susan Lorenzen, Michigan Dept. of Public Health; (b) Michigan Dept. of Natural Resources, Parks Division; Personal communication Dean Sandell, Michigan Dept. of Natural Resources, Forest Management Division; U.S. Forest Service; National Park Service.

Private and local public campgrounds have increased in both size and number. Most of this growth has occurred in private commercial and non-profit group campgrounds according to DPH license records of campsite construction permits. The more traditional state and federal camping opportunities have remained essentially static over this period, with a slight increase in average size occurring, due in part to closing of some small state forest campgrounds and a slight expansion of some state park campgrounds.

Campground Use

Summer occupancy rates in state and federal campgrounds appear to have remained fairly static (Table 13-4). Private sector and local public occupancy rates are less understood. No research on local public campground occupancy has been conducted. A recent study of commercial campground occupancy (Stynes and Mahoney, 1985) at Michigan Association of Private Campground Owners (MAPCO) campgrounds suggests that June 30-September 15 occupancy rates are approximately 40%.

Table 13-4. Memorial weekend through Labor Day weekend campground occupancy rates in Michigan by provider, 1980-85.

Year	State Parks(a)	State Forests(b)	Huron-Man- istee Nat. Forest(c)	Sleeping Bear Dunes National Lakeshore(d)
1980	57.0	34.8	N.A.	42.3
1981	55.1	34.6	N.A.	54.3
1982	56.2	36.4	N.A.	40.9
1983	58.6	32.1	38.0	37.3
1984	60.0	35.8	41.4	43.8
1985	56.0	30.5	40.8	42.6

SOURCES: (a) Michigan Dept. of Natural Resources, Parks Division. Data include overnight stays in backcountry, organization campgrounds, and horseman's campgrounds, which tend to slightly inflate occupancy rates; (b) Michigan Dept. of Natural Resources, Forest Mgt. Division; (c) U.S. Forest Service; (d) National Park Service. Data cover only Platte River campground from June 1-August 31 annually.

These estimates of occupancy rates can be used to estimate market shares in Michigan's camping market (Table 13-5). However, it is important to keep in mind the limitations of occupancy rate estimates. First, in state forest and national forest campgrounds, fees are often collected by an "honor system" in which campers self-register and many are never checked by management personnel. This procedure is likely to produce occupancy rates that are somewhat conservative since a 1982 study in state forest campgrounds estimated that 17% of campers did not register unless approached by management personnel (Nelson, et. al., 1984). Secondly, occupancy rates at commercial campgrounds are not likely to be as high as those at MAPCO campgrounds that participated in the 1985 MSU study on MAPCO campgrounds. Third, the lack of data on local public and non-profit group camping makes estimates of occupancy at these campgrounds only a best guess.

Market shares were estimated as follows. The 1980-81 NFO study (Michigan Dept. of Commerce, 1985) estimated that there were 18.0 million camper-days in Michigan during a one year period. Dividing this figure by the average party size of 4 reported by Styne and Mahoney (1985) yields 4.5 million camping party-days annually in Michigan. Since state park records for 1980-85 show that approximately 80% of state park camping takes place between the Memorial Day weekend and Labor Day weekend, this estimate can be multiplied by 0.8 to derive an estimate of 3.6 million camping party-days during the summer. Using the approximate occupancy rates reported in Table 13-4, multiplied by the number of campsites offered by each provider, a rough estimate can be obtained of market shares.

Table 13-5. Estimates of Michigan camping market share by campground provider.

Campground provider	No. sites	Season length	Occupancy rate	Est. camp party-days	Market share
Commercial	54,645	X 102	X .35	= 1,950,826	54.1%
State park	14,422	X 102	X .6	= 882,626	24.5%
Local public	13,645	X 102	X .3 ^a	= 417,537	11.6%
Group	4,750	X 102	X .3 ^a	= 145,350	4.0%
State forest	3,200	X 102	X .35	= 114,240	3.2%
Nat. forest	1,864	X 102	X .45	= 85,557	2.4%
National park	277	X 102	X .43	= 12,149	0.3%
Total	92,803	X 102	X .38	= 3,608,285	

^aBest guess.

This analysis suggests that the private sector captures 58% of the summer camping market and the public sector 42%. This is also the level of campsite supply each sector provides, suggesting that summer occupancy rates in public and private campgrounds are similar.

Campground Pricing

The price of camping in Michigan has steadily escalated during the last 5 years, with the largest known increases in the primitive, semi-developed public sector which had previously been characterized by a lack of fees (Table 13-6).

Table 13-6. Base camping fees (in dollars per night) at state, federal, and commercial campgrounds in Michigan, 1980-85.

Year	<u>State Parks</u>		State Forests	National Forests	National Parks	Commercial (averages)
	Rustic	Modern				
1980	2.00	6.00	2.00	2-4.00	NC or 2.00	6.06
1981	2.00	6.00	3.00	2-5.00	NC or 2.00	6.69
1982	3.00	6.00	3.00	2-5.00	NC or 2.00	7.30
1983	4.00	7.00	4.00	2-5.00	NC or 4.00	7.71
1984	4.00	7.00	4.00	2-6.00	NC or 6.00	8.26
1985	4.00	8.00	4.00	3-6.00	NC or 6.00	N.A.
Percent change						
1980-85	+100%	+33.3%	+100%	+50%	+300%	+36.3% ¹

¹Percent change for commercial is only for 1980-84.

SOURCES: Parks and Forest Management Divisions MDNR; U.S. Forest Service; National Park Service; Woodall's Campground Directory Eastern Edition, annual.

In interpreting this table caution should be exercised in comparing the fees in commercial campgrounds to other types of campgrounds. The estimates of commercial campground fees were obtained from systematic samples of 100 commercial campgrounds listed in the Michigan section of Woodall's Campground Directory Eastern Edition for each of the 5 years noted. These fees were base rates and often did not include electricity or sewer hookups.

Commercial campground fees show some important regional differences, unlike state and federal providers which are generally uniform throughout the state. A breakdown of the commercial campground fees from Table 13-6 by region shows that fees are higher in the Lower Peninsula than in the Upper Peninsula (Table 13-7).

Table 13-7. Estimated average base commercial campground fees in Michigan by region, 1980-84.

Year	MEAN REGIONAL PRICE IN DOLLARS		
	I	II	III
1980	5.50	6.30	6.06
1981	5.91	6.84	6.84
1982	6.20	7.37	7.53
1983	6.57	7.84	7.86
1984	7.13	8.40	8.49
Percent Change 1980-84	+29.6%	+33.3%	+40.0%

SOURCE: Derived from data published in Woodall's Campground Directory Eastern Edition, annual.

The shorter camping season in the Upper Peninsula resulting from adverse weather conditions, the smaller size campgrounds, and the comparatively lower prices combine to make profitability very challenging in this region.

Recreation Vehicle Shipments

Recreation vehicle shipments to dealers in Michigan and surrounding states increased steadily during the past 6 years (Table 13-8). Over the past 15 years such shipments appear to have been highly sensitive to energy prices and overall economic conditions. The highest levels of recreation vehicle shipments occurred during periods of economic growth and stable and abundant energy supplies. Recreation vehicles include travel trailers, 5th wheel travel trailers, folding tent campers, truck campers, motor homes, and van conversions. Pick-up truck camper shells are not included.

Table 13-8. Number of recreation vehicles shipped to Michigan and surrounding states, 1973-1984.

YEAR	Total Shipments	Number of Recreation Vehicles Shipped to Retailers in...					
		IL	IN	MI	MN	OH	WI
1970	380,300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1971	451,000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1972	582,900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1973	528,800	21,046	19,248	23,849	15,600	28,925	11,211
1974	295,800	11,743	8,401	13,341	8,726	13,548	6,685
1975	339,600	6,758	6,045	10,358	10,901	7,845	3,192
1976	541,100	24,891	20,454	32,195	15,205	28,300	14,123
1977	533,900	22,958	18,686	30,379	13,988	27,763	12,600
1978	526,300	20,420	18,631	31,210	13,526	25,210	10,894
1979	307,700	1,185	1,178	1,505	812	1,465	662
1980	181,400	6,022	6,567	8,109	2,921	7,909	3,029
1981	239,100	8,488	8,392	8,727	4,567	9,707	3,873
1982	258,000	10,372	9,804	11,713	5,057	10,397	4,257
1983	358,000	13,998	12,351	15,573	9,487	15,466	6,659
1984	398,200	14,136	11,787	21,344	8,163	17,123	7,327

SOURCE: Derived from data published in Year-end Reports of the Recreation Vehicle Industry Association. Used with permission.

In comparing shipments to Michigan versus other states in the region, Michigan has ranked first in shipments of travel trailers, 5th wheel trailers, folding tent campers, truck campers, and van conversions (Recreation Vehicle Industry Association, 1985). Michigan also ranked fourth in the nation in recreation vehicle shipments to dealers in 1984 (Table 13-9).

In terms of recreation vehicle ownership, Michigan residents and others in the North Central region are second behind those in the West. A 1984 study by the University of Michigan found that in the West 16.9% of the households sampled had a recreation vehicle compared to 9.8% in the North Central region (Recreation Vehicle Industry Association, 1985). This may in part be due to the large amount of public recreation areas on which to use these vehicles in the West and the relatively high proportion of households in the North Central region owning second homes.

Camper Characteristics

Two recent statewide studies of campers utilizing the facilities of two major camping providers have yielded useful descriptions of the types of campers comprising these providers' clienteles. These studies were of state forest campgrounds (1982-84) by Nelson et al. (1985) and commercial campgrounds affiliated with MAPCO (1984) by Stynes and Mahoney (1985). An additional study of state park users was conducted in 1985 and results should be available in June 1986.

In the state forest campground study registered campers were interviewed June-September in each of the 3 study years. Interviews were conducted at randomly selected campgrounds within a geographical cluster of campgrounds. Interviews were conducted on 20 afternoons during a 10-week period with 2 days randomly selected per week. The sample was systematically chosen with a random start. Results from this study are from 1984 unless otherwise noted. During that year 551 registered campers were interviewed at 11 campgrounds.

Table 13-9. Number of recreation vehicle shipments by state, 1984.

STATE	RANK	Total Number of Recreation Vehicle Shipments, 1984	% of U.S. Recreation Vehicle Shipments, 1984	Total Recreation Vehicle Shipments Per 100,000 Residents
California	1	50,810	12.76	198
Texas	2	33,608	8.44	210
Florida	3	23,135	5.81	211
MICHIGAN	4	21,344	5.36	235
Ohio	5	17,123	4.30	159
Pennsylvania	6	15,689	3.94	132
Illinois	7	14,136	3.55	123
Washington	8	13,897	3.49	320
Oregon	9	12,225	3.07	457
New York	10	12,185	3.06	69
Indiana	11	11,787	2.96	214
Arizona	12	10,035	2.52	329
Missouri	13	8,800	2.21	176
Minnesota	14	8,163	2.05	196
Wisconsin	15	7,327	1.84	154
North Carolina	16	7,287	1.83	118
Oklahoma	16	7,287	1.83	221
Massachusetts	17	6,969	1.75	120
New Jersey	18	6,809	1.71	91
Colorado	19	6,769	1.70	213
Louisiana	20	6,570	1.65	147
Virginia	21	6,530	1.64	116
Tennessee	22	5,933	1.49	126
Utah	22	5,933	1.49	359
Iowa	23	5,893	1.48	203
Georgia	24	5,535	1.39	95
Maryland	24	5,535	1.39	127
Kansas	25	5,495	1.38	225
Arkansas	26	4,062	1.02	173
Idaho	27	3,982	1.00	398
South Carolina	28	3,504	0.88	106
Alabama	29	3,464	0.87	87
Nevada	30	3,425	0.86	376
New Mexico	30	3,425	0.86	241
Nebraska	31	3,106	0.78	193
Connecticut	32	2,827	0.71	90
New Hampshire	32	2,827	0.71	289
West Virginia	32	2,827	0.71	145
Montana	33	2,509	0.63	304
Kentucky	34	2,469	0.62	66
Mississippi	35	2,230	0.56	86
North Dakota	36	1,991	0.50	290
Maine	37	1,911	0.48	165
South Dakota	38	1,314	0.33	186
Wyoming	38	1,314	0.33	257
Alaska	39	1,075	0.27	215
Vermont	39	1,075	0.27	203
Rhode Island	40	1,035	0.26	108
Delaware	41	836	0.21	136
Hawaii	...	*	*	*

*Not measurable.

SOURCE: Recreation Vehicle Industry Association, 1985. *RVs... America's Family Camping Vehicles: A Year-end Report, 1984*. Reston, VA: Recreation Vehicle Industry Association. Reprinted with permission.

In the MAPCO study the owners of 31 campgrounds that provided sites for transient campers (versus seasonal rentals) distributed a questionnaire developed by MSU to their patrons. The campgrounds were selected to provide geographic representation across

Michigan. The questionnaires were distributed to registered campers on 10 or 11 randomly selected dates from June 30-September 15. In each campground, a systematic sample of registered campers was drawn. Up to 30 questionnaires were distributed on any sample day. Less than 30 were distributed only if the number of registered campers was less than 30 on the sample day. Of the 5,100 questionnaires distributed, 2,605 (51%) were completed and returned.

The results of the two studies are compared below. However, some preliminary cautions should be noted. First, the weighting schemes of the two studies were somewhat different. Both studies weighted to correct for length of stay bias (the more nights one stays in a campground the greater one's chance of being interviewed), although slightly different procedures were used. In state forest campgrounds, responses were weighted inversely by the length of stay on the current trip. In MAPCO campgrounds, responses were weighted by the use of commercial campgrounds the previous year, both by frequency of trips and average length of stay. Second, the state forest campground study also weighted the results based on the size of the campground (in small campgrounds one tends to interview a greater proportion of the campers during the interview time allotted, thus overestimating their proportion in the total population). In the MAPCO study the sample was a set number of registered campers on a sample day, and the total use of one sample campground versus another was not accounted for if on sample days the number of campers in each exceeded the set number of questionnaires to be distributed. In view of these differences and the differences in sampling procedures noted above, comparisons should be made on a macro level, noting only sizeable differences in the characteristics of the two types of campers.

A much higher percentage of out-of-state visitors was observed at MAPCO campgrounds than at state forest campgrounds (Table 13-10). In terms of total nights camped in Michigan, the much lower figure for MAPCO campgrounds is attributable to the higher percentage of out-of-state users. Previous use of the campground is also susceptible to a similar explanation in terms of the difference between the two groups. However, the large proportion of first-time users at both types of facilities may point to a need for both types of sites to provide information about the local area, including recreation opportunities, available services, directions, etc. No important differences are evident in party size, length of stay, and local spending. While a difference between party spending per day appears, per capita spending is equal.

Table 13-10. Selected characteristics of registered campers at Michigan State Forest campgrounds and at MAPCO campgrounds.

Characteristic	State forest	MAPCO
Michigan resident	90%	57%
Mean camping party size	3.5 persons	4.0 persons
Mean length of stay at campground	3.3 nights	3.7 nights
Local spending per party/day ¹	\$33.24	\$38.50
Local spending per person/day ¹	\$ 9.50	\$ 9.50
Previously stayed in campground	57%	41%
Total nights camped in 1983	15.8 nights	18.8 nights
Michigan nights camped in 1983	12.3 nights	6.9 nights

¹Includes campground fees. State forest study defined "local" as within 20 miles of campgrounds in Lower Peninsula and 30 miles in Upper Peninsula. MAPCO study defined "local" as within 25 miles statewide.

The age of respondents differed little while income levels reported in the two studies differed somewhat. The mean age of respondents in the state forest campground study was 40 whereas in the MAPCO study it was 43. Income levels of state forest campers appear to be generally lower than MAPCO campers, with 64% of state forest campers under \$30,000 whereas only 49% of MAPCO campers were in that range (Table 13-11).

Table 13-11. Income distributions of Michigan state forest campground and MAPCO camping parties.

Income level	State forest	MAPCO
Less than \$10,000	11%	5%
\$10-\$19,999	28	15
\$20-\$29,999	25	29
\$30-\$39,999	21	27
\$40-\$49,999	10	13
\$50-\$59,999	3	7
\$60,000 +	2	5

Campers at state forest campgrounds were more oriented to resource-based recreation activities than MAPCO campers (Table 13-12). Only in swimming and ORV use did MAPCO campers participate at levels similar to state forest campers. The lower level of participation in such activities at MAPCO sites may in part be dictated by opportunities available in or near the campground. All state forest campgrounds are located on a lake or river, which is not the case for all MAPCO sites. Also, many out-of-staters may not be familiar with the wide range of recreation opportunities in Michigan, and MAPCO campgrounds serve a higher proportion of nonresident campers than state forest campgrounds.

Table 13-12. Recreation activities of Michigan state forest campground and MAPCO camping parties.

Activity	PERCENT PARTICIPATING	
	State forest	MAPCO
Swimming	69%	66%
Fishing	68	32
Nature observation	58	36
Hiking/walking	48	21
Boating	29	6
Pick berries, mushrooms, etc.	28	N.A.
Canoeing	24	12
Rockhounding	24	N.A.
Off road vehicle use	5	7

MAPCO campers tended to have more expensive, self-contained shelter types than state forest campers (Table 13-13). Trailers and motor homes accounted for almost 50% of the shelters of MAPCO users, but less than 30% of state forest camper shelters. This

suggests a "roughing it" appeal at state forest campgrounds that fits with the more primitive nature of the sites.

Table 13-13. Shelters type(s) used by Michigan state forest and MAPCO campers.

Shelter type	PERCENTAGE USING ¹	
	State forest	MAPCO
Tent	47%	25%
Trailer	20	28
Tent trailer	16	20
Pickup camper or shell	13	7
Motor home/van conversion	9	21
Other	7	0

¹Percentages may not add to 100 due to 2 or more shelters used on the same site.

The distribution of camping nights in Michigan during the previous year also provides some clues to the types of camping opportunities used by each group (Table 13-14). State forest campers appear to be loyal to state forest campgrounds whereas MAPCO campers appear to be most loyal to a MAPCO level of facilities. While only 37% of MAPCO campers' previous year use was in commercial campgrounds, many state parks provide a similar range of services and amenities such as electricity, water hookups, septic tank disposal, and stores. State parks accounted for 28% of MAPCO respondents' previous year camping efforts in Michigan. With the minimum overlap between the two groups of respondents (5% of MAPCO respondent camping time in state forest campgrounds) it appears that these two camping opportunities in general attract different segments of campers.

Table 13-14. Distribution of campground use in Michigan in 1983 for state forest and MAPCO campers.

Campground type	PERCENTAGE OF NIGHTS	
	State forest	MAPCO
State forest	52%	5%
State park	14	28
Other public campgrounds	10	13
Commercial	12	37
All other MI camping ¹	12	18

¹Includes sites such as public land not specifically designated as a campground, roadsides, private land, etc.

Conclusion

The statistics presented here suggest that the use of camping opportunities in Michigan has grown in the past 5 years. The 25% expansion in the campsite supply occurring primarily in the private sector, coupled with the reported steady occupancy rates in state and federal public campgrounds and increases in recreation vehicle shipments in Michigan and surrounding states support this premise. What is unclear is whether the number of people camping has increased or whether existing campers have been spending more time camping.

The expenditures of campers in the local area during their camping experience has a significant economic impact on local economies. The average local spending per party per day of \$38.85 reported by Stynes and Mahoney (1985), multiplied by the 4.5 million camping party nights estimated to annually occur in Michigan in the NFO study (Michigan Dept. of Commerce, 1985), suggests that over \$175 million are disbursed in local economies by campers. While portions of this money may also be attributed to other recreation activities done while camping, (e.g., fishing, sightseeing) the campground provides the base of operations from which these other activities emanate.

Future research is needed to provide a more complete picture of camping in Michigan. The use and characteristics of campers in non-MAPCO commercial campgrounds, local public, and group campgrounds are unknown. Furthermore, little research has been conducted on dispersed camping in Michigan. Finally, a lack of uniformity in record keeping makes in-depth comparisons between camping providers difficult. A more uniform system of reporting and making camping data more available would provide information needed to efficiently develop tourism plans and facilities in Michigan.

Literature Cited

- Michigan Department of Commerce. 1983. "Statewide Lodging Supply." Lansing, MI: Michigan Travel Bureau.
- _____. 1985. "National Family Opinion Travel and Tourism Study, Report 4." Lansing, MI: Michigan Travel Bureau.
- Michigan Department of Natural Resources. 1979. "1979 Michigan Recreation Resource Inventory." Lansing, MI: Recreation Services Division.
- Michigan Department of Public Health. 1985. "Licensed and Proposed Campgrounds in Michigan." Lansing, MI: Michigan Department of Public Health.
- Michigan Department of Transportation. 1985. Highway Travel Information Centers and Michigan Tourism: 1980 Visitor Survey. Lansing, MI: Michigan Department of Transportation.
- National Park Service. n.d. Federal Recreation Fee Report. 1984. Washington, D.C.: National Park Service.
- _____. 1985. Camping in the National Park System. Washington, D.C.: U.S. Government Printing Office.

- Nelson, C., D. Holecek, and K. Beatty. 1985. "Final Report: 1984 State Forest Camper Interviews." Department of Park and Recreation Resources, Michigan State University. East Lansing.
- Nelson, C., D. Holecek, D. Feltus, and D. Sandell. 1984. "Michigan State Forest Campground Host Program." In Burnham H. Martin and Dorothy T. Taylor (eds.). Fees for Outdoor Recreation on Lands Open to the Public: Conference Proceedings. Gorham, NH: Appalachian Mountain Club.
- Recreation Vehicle Industry Association. 1985. RVs....America's Family Camping Vehicles: A Year-End Report 1984. Reston, VA: Recreation Vehicle Industry Association.
- Stynes, D. and E. Mahoney. 1986. "1984 Michigan Commercial Campground Marketing Study." Unpublished report, Department of Park and Recreation Resources, Michigan State University. East Lansing.

CHAPTER 14

RECREATIONAL BOATING IN MICHIGAN

Daniel J. Stynes

Michigan has an abundance of water resources (Table 14-1) and leads the nation in the number of registered watercraft (Table 14-2). The number of active registered boats in 1985 was approximately 600,000, about one for every five households in the state. These figures do not include many small unpowered craft that do not have to be registered. The four largest categories of registered craft are outboards (66.6%), inboards (14.3%), sail (8.0%) and pontoon (5.3%) (Table 14-3). Over half of the registered craft are between 12 and 16 feet in length and 88% are less than 20 feet in length (Table 14-4). The distribution of registered craft throughout the state roughly follows population distributions with higher per capita rates of boat ownership in coastal areas and counties with extensive water resources.

Comprehensive recreational boating surveys have been completed approximately every three years since 1965. The most recent surveys were conducted by Waterways Division, MDNR in 1977 and the Michigan Sea Grant Program in 1980 and 1981. Cooperative efforts among the Michigan Sea Grant program, Michigan State University's Agricultural Experiment Station, Waterways Division, MDNR, and the Michigan Boating Industries Association make boating one of the best documented recreation activities in the state.

Boating activity is closely related to second homes and fishing. Thirty percent of Michigan's registered boat owners also own a second home, mostly on a Great Lake or inland lake waterfront site. Over half of all boating activity involves fishing. Pleasure cruising (35%) and waterskiing (10%) are also popular boating activities. In response to improved fishing opportunities, fishing as a proportion of Great Lakes boating increased from 44% in 1968 to 57% in 1980.

Forty percent of Michigan's registered boating fleet is stored at a non-waterfront site and trailered to one of Michigan's 1,353 public boating access sites (Table 14-1). Trailered craft are mostly smaller in length and used less frequently than boats stored at waterfront locations. Most boating activity is generated by craft stored at an inland or Great Lake waterfront site. Forty percent of the fleet is located on an inland lake and 17% on the Great Lakes. Boats stored on inland lakes are divided about equally between primary residences and second homes. Marinas and primary waterfront residences account for most of the Great Lakes waterfront storage (Tables 14-5 and 14-6).

In 1980 Michigan registered boaters logged 16.9 million boat-days and 70 million person-days of recreational boating (Table 14-7). About one third of these boat-days took place on the Great Lakes. Most boating occurs close to home or in conjunction with a second home or marina. Southeast Michigan generates about half of all Great Lakes boat-days and a third of all inland lake boat-days. Northwest Michigan and the Mackinac straits area are the strongest importers of boating activity. Only 3-5% of registered boater activity comes from out-of-state, although a larger amount of unmeasured out-of-state boating activity results from nonresidents using craft not registered in Michigan, or visiting friends and relatives in Michigan who have boats. A 1980 general recreation survey estimated that nonresidents account for over 15% of boating activity occasions in Michigan (Michigan Dept. of Natural Resources, 1985:B-22).

The supply of boating facilities includes public access sites, marinas, and harbors of refuge. An inventory of Great Lakes marinas was completed in 1983 from aerial photo-

graphs of the coastline. In that year, Michigan had 746 marinas containing 36,651 slips that serve the Great Lakes (Tables 14-10 and 14-12; Figure 14-1). This represents a 20% increase over 1978 (Tables 14-11 and 14-13; Figure 14-2). The vast majority of Michigan's marinas are commercial facilities. Waterways Division, MDNR has developed 67 public marinas along Michigan's Great Lakes shoreline. Twenty-five of these serve as harbors-of-refuge for craft on the Great Lakes (Figure 14-3).

Boating generates a considerable amount of economic activity. Michigan ranks fourth behind Florida, California, and New York in total marine sales (Tables 14-14 and 14-15). Spending by Michigan registered boat owners in 1981 was estimated at \$1 billion (Table 14-16). About half of all boater spending can be attributed to the Great Lakes. Boater spending is divided 1/3 to craft-related spending and 2/3 to spending associated with boating trips. Boaters have significant impacts on coastal economies, generating income and employment in boating industries (Table 14-17) as well as other retail and service sectors. A single 100-slip marina on the Great Lakes generates annually over \$500,000 in spending by boaters storing their craft at the facility.

Boat registrations have increased at a rate of about 3% per year since 1965. The largest increase in boating activity in the past ten years has been in small craft activity on the Great Lakes. This growth can be attributed to increases in water quality, fishing opportunities, public access sites, and marina facilities. The demand for slips continues to out-strip supply, particularly in southern Michigan and increasingly in northern coastal communities experiencing rapid growth in population, second home construction, and tourism.

The market for boating in Michigan looks very good for the next ten years, if not constrained by waterfront access and economic conditions. The lack of available slips continues to constrain sales of larger craft in many areas of the state. The only period when boat sales and registrations slumped was from 1977 to 1980 as a result of an economic recession, gasoline price increases, and high interest rates. Except for these constraining factors, boating should continue to grow in Michigan, putting increasing demands on waterfront facilities and management authorities.

References

- Gartner, William C., Gene L. Brothers, Charles Nelson, Donald Holecek, and Lewis Moncrief. n.d. "1981 State Aid for Marine Safety Program." Prepared by Department of Park and Recreation Resources, Michigan State University for Law Enforcement Division, Michigan Department of Natural Resources.
- Gartner, William C. and Donald F. Holecek. 1982. "The Economic Impact of a Short-term Tourism Industry Exposition (1980 Greater Michigan Boat and Fishing Show)." Michigan State University Agricultural Experiment Station Research Report 436. East Lansing.
- Holecek, Donald F. and Gene L. Brothers. 1983. Documentation and Analysis of Temporal and Spatial Changes in Marinas Serving Michigan's Great Lakes. Report to Waterways Division, Michigan Dept. of Natural Resources. Dept. of Park and Recreation Resources, Michigan State University. East Lansing.
- Michigan Department of Natural Resources. 1985. "1985 Michigan Recreation Plan Public Review Draft Appendix B." Lansing, MI: Michigan Dept. of Natural Resources, Recreation Services Division.

Stynes, Daniel J. 1982. "Trends in Recreational Boating in Michigan." In Fridgen, J.D. and D.J. Allen (eds.). Michigan Tourism: How Can Research Help? Symposium Proceedings, Special Report #6, Agricultural Experiment Station, Michigan State University, East Lansing.

Stynes, Daniel J. and Donald F. Holecek. 1982. Michigan Great Lakes Recreational Boating: A Synthesis of Current Information. Michigan Sea Grant Report MICHU-SG-82-203. Ann Arbor, MI: Michigan Sea Grant Publications.

Stynes, Daniel J. and David Safronoff. 1982. 1980 Michigan Recreational Boating Survey. Michigan Sea Grant Report MICHU-SG-82-202. Ann Arbor, MI: Michigan Sea Grant Publications.

Stynes, Daniel J., Gene L. Brothers, Donald F. Holecek, and Dave Verbyla. 1983. Spending Patterns and Economic Impacts of Michigan Registered Boat Owners. Michigan Sea Grant Report MICHU-SG-83-210. Ann Arbor, MI: Michigan Sea Grant Publications.

Table 14-1. Water resources by Michigan county.

COUNTY	INLAND LAKES OVER 50 ACRES IN SIZE ^a		STREAM MILEAGE ^b			MILES OF GREAT LAKE SHORELINE ^c	NUMBER OF PUBLIC ACCESS SITES ^d
	Number of lakes	Combined area in acres	Mainstream	Tributaries	Total		
Alcona	13	11,842	31	331	362	27.4	7
Alger	51	8,679	101	608	709	120.4	10
Allegan	29	7,031	72	445	517	24.0	27
Alpena	13	12,747	76	225	301	61.0	9
Antrim	23	17,879	28	236	264	26.5	32
Arenac	0	0	40	116	156	47.3	7
Baraga	38	6,651	101	595	696	69.9	22
Barry	37	8,565	34	238	272	0.0	33
Bay	1	112	28	22	50	36.2	9
Benzie	18	17,016	53	51	104	24.8	22
Berrien	11	2,271	83	417	500	13.7	11
Branch	34	7,468	45	280	325	0.0	16
Calhoun	28	3,688	84	456	540	0.0	16
Cass	47	8,250	18	211	229	0.0	24
Charlevoix	19	22,266	20	195	215	102.4	20
Cheboygan	22	48,523	63	357	420	34.5	21
Chippewa	34	9,015	97	703	800	456.0	25
Clare	29	4,041	29	302	331	0.0	16
Clinton	4	484	62	257	319	0.0	5
Crawford	10	2,730	71	133	204	0.0	31
Delta	20	3,092	187	327	514	198.7	24
Dickinson	30	4,992	168	477	645	0.0	26
Eaton	5	407	51	156	207	0.0	2
Emmet	9	8,288	31	67	98	75.0	7
Genesee	17	3,413	59	296	355	0.0	5
Gladwin	15	6,349	72	401	473	0.0	11
Gogebic	78	27,253	168	1,036	1,204	30.1	14
Grand Traverse	22	13,464	18	150	168	55.5	26
Gratiot	6	1,165	45	196	241	0.0	4
Hillsdale	21	2,776	19	279	298	0.0	9
Houghton	25	21,391	116	807	923	50.6	28
Huron	1	76	56	886	942	92.5	12
Ingham	2	533	42	192	234	0.0	2
Ironia	8	1,727	73	391	464	0.0	13
Iosco	23	10,102	25	234	259	36.2	11
Iron	87	21,376	167	735	902	0.0	32
Isabella	6	1,511	20	310	330	0.0	3
Jackson	42	8,523	40	284	324	0.0	6
Kalamazoo	32	8,477	44	321	365	0.0	18
Kalkaska	22	3,733	83	201	284	0.0	27
Kent	42	5,786	81	691	772	0.0	19
Keweenaw	14	4,957	19	252	271	100.5 ^e	10
Lake	17	2,639	99	151	250	0.0	36
Lapeer	18	3,448	44	550	594	0.0	8
Leelanau	15	17,003	0	58	58	151.4	17

Lenawee	20	3,934	38	584	622	0.0	8
Livingston	61	7,725	54	415	469	0.0	12
Luce	29	12,478	133	525	658	31.0	27
Mackinac	34	21,467	55	292	347	298.4	20
Macomb	2	895	44	252	296	26.5	5
Manistee	9	7,041	77	199	276	25.4	23
Marquette	87	22,401	221	1,685	1,906	79.4	60
Mason	20	8,180	93	145	238	27.5	25
Meosota	28	8,497	50	243	293	0.0	25
Menominee	17	3,803	241	574	815	41.3	15
Midland	6	2,409	66	243	309	0.0	2
Missaukee	13	4,287	21	188	209	0.0	7
Monroe	3	265	65	394	459	56.6	9
Montcalm	35	5,099	15	462	477	0.0	28
Montmorency	28	8,846	50	256	306	0.0	20
Muskegon	21	9,966	25	369	394	26.9	8
Newaygo	34	7,816	58	426	484	0.0	20
Oakland	95	17,792	50	419	469	0.0	37
Oceana	11	2,938	34	190	224	27.4	5
Ogemaw	28	4,122	50	331	381	0.0	28
Ontonagon	9	10,391	138	1,144	1,282	56.2	8
Oscoda	15	1,611	44	257	301	0.0	19
Oscoda	12	2,380	35	184	219	0.0	10
Otsego	28	4,905	29	169	198	0.0	19
Ottawa	12	4,709	50	257	307	25.0	13
Presque Isle	26	13,504	35	266	301	68.7	19
Roscommon	19	37,536	23	181	204	0.0	8
Saginaw	2	1,400	147	446	593	0.0	6
Sanilac	0	0	30	977	1,007	40.5	4
Schoolcraft	79	23,121	168	566	734	46.1	27
Shiawassee	6	631	27	280	307	0.0	0
St. Clair	6	385	149	810	959	164.2	13
St. Joseph	38	8,136	114	178	292	0.0	18
Tuscola	5	908	38	146	184	20.1	7
Van Buren	34	4,737	33	291	324	13.4	28
Washtenaw	38	6,810	41	331	372	0.0	16
Wayne	7	1,886	62	329	391	75.4	8
Wexford	10	6,297	33	221	254	0.0	13
Total	1,965	671,047	5,499	30,851	36,350	2,984.6 ^e	1,353

^aSOURCE: Michigan Department of Natural Resources. 1974. "Michigan Lake Inventory." Lansing, MI: Michigan Department of Natural Resources, Office of Planning Services.

^bSOURCE: Brown, C.J.D. 1944. "Michigan Streams-Their Lengths, Distribution and Drainage Areas." Michigan Conservation. 13(5):9-10.

^cSOURCE: Humphrys, C.R., Ali Razaque, J.O. Veatch, and Rex Yu. n.d. Preliminary Report: Statistical Data Related to Michigan Water Resources and Water Uses. Dept. of Resource Development, Michigan State University. East Lansing.

^dSOURCE: Michigan Department of Natural Resources. 1985. "Public Access Site Master List." Lansing, MI: Michigan Dept. of Natural Resources, Waterways Division.

^eDoes not include shoreline of Isle Royale.

Table 14-2. Number of numbered boats by state, 1983 and 1984.

State/Territory	1984 Rank	No. Numbered Boats		Scope Of Current Boat Numbering System
		1983	1984	
■ MICHIGAN	1	654,143	665,540	All motorboats
Minnesota	2	622,872	629,291	All watercraft with exceptions ¹
California	3	605,387	619,087	All motorboats; sailboats over 8' in length
Texas	4	594,868	599,591	All motorboats
Florida	5	526,495	517,365	All motorboats
Wisconsin	6	425,905	436,221	All motorboats and sailboats over 12' in length
Ohio	7	334,423	338,184	All watercraft
New York	8	327,700	331,742	All motorboats
Missouri	9	302,730	328,440	All motorboats; sailboats over 12' in length
Louisiana	10	303,044	312,119	All motorboats
Arkansas	11	293,928	309,831	All motorboats with exceptions ²
Illinois	12	270,043	275,670	All motorboats and sailboats over 12' in length
Washington	13	135,642	253,980	All motorboats used on federal waters
Alabama	14	227,657	229,890	All motorboats, sailboats, and rental boats
Georgia	15	219,876	225,812	All motorboats; sailboats 12' or more in length
Pennsylvania	16	209,241	217,293	All motorboats
North Carolina	17	192,432	202,908	All motorboats except boats with electric motors
Tennessee	18	192,018	196,446	All motorboats and sailboats
Oklahoma	19	202,641	193,022	All watercraft
Massachusetts	20	161,137	184,140	All motorboats
Iowa	21	185,129	175,670	All watercraft with exceptions ³
Indiana	22	174,479	173,006	All motorboats
South Carolina	23	209,615	168,323	All motorboats
Virginia	24	145,085	148,999	All motorboats
Maryland	25	142,515	142,795	All motorboats
New Jersey	26	138,367	140,884	All motorboats; all other boats more than 12' in length
Oregon	27	138,131	140,003	All motorboats and sailboats 12' in length or greater
Mississippi	28	123,249	122,237	All motorboats
Maine	29	116,419	117,842	All motorboats
Kentucky	30	114,767	114,546	All motorboats
Arizona	31	107,333	112,047	All motorboats
Kansas	32	81,919	83,505	All motorboats and sailboats
Connecticut	33	66,881	72,591	All motorboats; sailboats 19 1/2' or more in length
Idaho	34	64,703	67,471	All motorboats
Colorado	35	64,367	66,016	All motorboats and sailboats
Nebraska	36	50,994	54,913	All motorboats
Utah	37	47,152	51,781	All motorboats
West Virginia	38	54,468	38,742	All motorboats
Delaware	39	36,167	37,402	All motorboats
Montana	40	32,981	34,395	All motorboats
New Mexico	41	30,919	34,114	All motorboats and sailboats
North Dakota	42	38,134	33,723	All motorboats
South Dakota	43	29,305	33,091	All motorboats
Nevada	44	30,273	31,288	All motorboats
Rhode Island	45	23,876	31,231	All motorboats
Vermont	46	28,737	29,774	All motorboats
Alaska	47	17,082	24,608	All motorboats used on federal waters
Puerto Rico	48	23,013	23,083	All motorboats
Wyoming	49	19,386	19,831	All motorboats
Hawaii	50	12,604	13,112	All motorboats and sailboats over 8' in length
New Hampshire	51	6,579	9,242	All motorboats used on federal waters
Virgin Islands	52	2,872	3,425	All motorboats
District of Columbia	53	4,524	3,391	All watercraft
Guam ⁴	54	680	690	All motorboats
N. Marianas ⁵	55	134	190	All motorboats
American Samoa ⁵	56	73	78	All motorboats

¹Minnesota excludes non-motorized boats 9' in length and under, duckboats during duckhunting season, and riceboats during harvest season.

²Arkansas excludes boats with motors of 10 HP or less used only during daylight.

³Iowa excludes inflatables under 7' in length and canoes/kayaks under 13' in length.

⁴1983 and 1984 figures are estimates.

⁵1984 figures are estimates.

SOURCE: U.S. Dept. of Transportation, Coast Guard. 1985. Boating Statistics 1984. Washington, D.C.: U.S. Coast Guard.

Table 14-3. Number of registered watercraft by Michigan county by type of craft, as of December 4, 1985.

COUNTY	TYPE OF CRAFT								Total	% OF TOTAL THAT ARE COMMERCIAL WATERCRAFT
	Inboard	Outboard	Sail/Auxil	Pontoon	Other Power	Sail	Canoe	Other Non- Power		
Alcona	124	1,270	14	113	7	28	21	132	1,709	0.8
Alger	76	1,086	6	28	1	10	42	18	1,267	1.2
Allegan	728	5,405	137	421	37	209	113	114	7,164	0.3
Alpena	247	3,091	51	214	4	55	72	59	3,793	1.5
Antrim	363	2,379	43	168	11	307	50	146	3,467	1.9
Arenac	209	1,115	9	117	3	25	27	1,262	2,767	1.1
Baraga	70	600	2	13	1	6	13	4	709	1.1
Barry	416	4,377	40	750	30	243	84	164	6,104	0.3
Bay	1,626	6,064	230	457	31	231	190	99	8,928	0.3
Benzie	161	1,577	26	86	3	324	38	491	2,706	1.6
Berrien	1,504	7,618	186	447	76	509	122	264	10,726	0.6
Branch	308	3,851	16	534	19	129	46	100	5,003	1.0
Calhoun	556	6,961	70	594	87	380	171	172	8,991	0.3
Cass	551	4,883	30	959	41	393	72	169	7,098	0.8
Charlevoix	453	1,839	129	141	19	370	29	56	3,036	1.5
Cheboygan	485	2,755	30	184	8	168	48	116	3,794	1.2
Chippewa	320	3,246	42	63	5	48	62	76	3,862	6.7
Clare	121	2,156	17	395	10	32	45	108	2,884	0.4
Clinton	288	3,213	50	338	29	159	149	89	4,315	0.2
Crawford	55	805	8	105	2	46	68	995	2,084	2.1
Delta	183	3,104	46	51	9	50	68	32	3,543	0.9
Dickinson	67	2,098	12	97	13	23	99	27	2,436	0.7
Eaton	441	4,601	79	477	30	328	182	123	6,261	0.2
Emmet	409	2,121	121	172	12	578	78	77	3,568	1.5
Genesee	3,366	19,215	446	1,908	102	1,174	764	517	27,492	0.2
Gladwin	193	2,064	5	540	7	29	47	136	3,021	0.1
Gogebic	76	2,003	4	40	12	15	49	64	2,263	1.6
Gd. Traverse	902	5,514	332	418	30	839	94	203	8,332	0.9
Gratiot	146	1,963	13	175	11	79	58	19	2,464	0.2
Hillsdale	182	2,376	4	445	21	115	40	41	3,224	0.2
Houghton	312	1,776	40	30	11	49	54	30	2,302	1.7
Huron	486	1,941	37	115	10	51	28	77	2,745	2.4
Ingham	1,182	9,271	316	973	86	1,285	381	312	13,806	0.2
Ionia	158	2,702	28	276	27	59	87	95	3,432	0.8
Iosco	336	2,928	57	226	12	126	81	286	4,052	1.3
Iron	46	1,817	3	77	8	16	58	18	2,043	1.7
Isabella	181	2,040	48	250	12	115	52	110	2,808	0.1
Jackson	767	7,660	89	1,669	88	763	218	197	11,451	0.5
Kalamazoo	1,373	10,327	319	1,021	62	1,217	245	187	14,751	0.2
Kalkaska	147	1,275	11	99	6	40	32	73	1,683	1.2
Kent	4,415	21,341	880	2,192	195	2,038	533	576	32,170	0.3
Keweenaw	47	216	2	5	0	3	13	26	312	22.2
Lake	41	773	7	70	13	11	10	788	1,713	0.5
Lapeer	375	2,988	53	257	25	100	110	139	4,047	0.4

Leelanau	378	2,102	99	130	10	475	31	107	3,332	1.1
Lenawee	569	4,363	48	788	28	381	119	91	6,387	0.2
Livingston	1,168	5,477	119	1,058	41	504	182	331	8,880	0.5
Luce	24	990	7	66	1	9	37	35	1,169	1.7
Mackinac	265	2,128	27	85	1	105	38	26	2,675	3.7
Macomb	11,724	20,706	1,222	916	104	1,167	398	433	36,670	0.2
Manistee	240	2,138	36	52	7	114	25	58	2,670	1.6
Marquette	308	4,088	101	123	76	102	274	127	5,199	0.9
Mason	312	2,324	47	98	4	104	31	86	3,006	2.6
Mecosta	137	2,385	23	487	17	80	49	177	3,355	0.7
Menominee	134	1,819	32	39	7	40	42	26	2,139	0.4
Midland	710	4,663	197	402	28	558	255	150	6,963	0.3
Missaukee	52	944	9	136	0	20	21	191	1,373	0.1
Monroe	2,003	5,277	200	257	54	182	120	143	8,236	0.6
Montcalm	165	3,378	26	534	39	109	59	85	4,395	0.7
Montmorency	35	1,276	5	144	2	14	19	84	1,579	1.6
Muskegon	1,644	8,370	354	287	49	475	132	338	11,649	0.4
Newaygo	188	3,000	31	468	29	80	74	267	4,137	0.4
Oakland	11,337	30,021	2,093	4,047	260	5,399	823	1,431	55,411	0.3
Oceana	136	1,308	46	38	1	203	15	63	1,810	2.0
Ogemaw	95	1,737	8	244	4	40	29	199	2,356	1.2
Ontonagon	49	909	8	11	0	4	31	8	1,020	0.3
Osceola	76	1,213	8	95	10	24	45	150	1,621	0.4
Oscoda	37	716	5	39	0	4	23	454	1,278	4.5
Otsego	135	1,416	20	116	7	89	47	39	1,869	1.1
Ottawa	2,767	8,941	458	339	83	759	157	235	13,739	0.4
Presque Isle	108	1,677	12	155	4	40	29	25	2,050	2.0
Roscommon	274	3,111	29	840	12	153	59	220	4,698	5.5
Saginaw	1,823	10,442	245	771	49	532	505	116	14,483	0.1
St. Clair	2,999	6,635	273	91	18	213	113	124	10,466	1.0
St. Joseph	384	4,881	21	657	34	236	84	140	6,437	1.2
Sanilac	205	1,241	46	24	3	39	15	36	1,609	0.8
Schoolcraft	37	1,255	3	70	5	8	26	80	1,484	1.0
Shiawassee	312	3,184	41	232	17	123	158	128	4,195	0.2
Tuscola	498	2,845	41	144	17	62	88	46	3,741	0.3
Van Buren	516	4,260	81	558	52	201	67	119	5,854	0.9
Washtenaw	1,340	7,239	319	850	72	1,645	301	600	12,366	1.0
Wayne	13,944	43,140	2,350	2,596	232	2,919	976	1,000	67,157	0.4
Wexford	156	1,922	27	243	11	110	35	886	3,390	0.7
Foreign	3,342	13,809	757	2,502	57	2,036	123	265	22,891	0.3
Unknown County	1,639	1,640	228	241	37	239	62	874	4,960	0.7
State Totals	86,757	405,375	13,790	38,683	2,708	32,372	10,560	18,780	609,025	0.6

SOURCE: Michigan Department of State.

Table 14-4. Number of registered watercraft by Michigan county by length of craft, as of December 4, 1985.

COUNTY	LENGTH OF CRAFT								TOTAL	PERCENT OF TOTAL THAT ARE COMMERCIAL WATERCRAFT
	<12.0'	12.0'-15.9'	16.0'-20.0'	20.1'-28.0'	28.1'-35.0'	35.1'-42.0'	42.1'-50.0'	>50.0'		
Alcona	75	1,123	389	114	7	1	0	0	1,709	0.8
Alger	57	982	162	43	8	7	3	5	1,267	1.2
Allegan	565	4,644	1,265	551	90	37	7	5	7,164	0.3
Alpena	307	2,579	580	283	27	15	2	0	3,793	1.5
Antrim	160	2,246	771	249	33	7	1	0	3,467	1.9
Arenac	50	954	1,549	193	15	4	1	1	2,767	1.1
Baraga	31	511	128	36	2	1	0	0	709	1.1
Barry	409	3,924	1,240	492	31	6	2	0	6,104	0.3
Bay	301	4,908	2,398	1,093	153	55	17	3	8,928	0.3
Benzie	114	1,670	737	156	26	3	0	0	2,706	1.6
Berrien	521	6,552	2,275	1,091	210	58	14	5	10,726	0.6
Branch	293	3,421	975	302	12	0	0	0	5,003	1.0
Calhoun	672	6,225	1,460	550	57	21	3	3	8,991	0.3
Cass	448	4,370	1,634	605	35	5	0	1	7,098	0.8
Charlevoix	168	1,696	702	372	64	23	8	3	3,036	1.5
Cheboygan	132	2,479	768	358	32	12	4	9	3,794	1.2
Chippewa	67	2,857	717	182	20	7	6	6	3,862	6.7
Clare	163	2,068	442	205	4	2	0	0	2,884	0.4
Clinton	236	2,866	865	318	24	6	0	0	4,315	0.2
Crawford	86	729	1,125	139	5	0	0	0	2,084	2.1
Delta	116	2,754	485	125	31	16	15	1	3,543	0.9
Dickinson	99	1,965	278	73	13	3	0	0	2,436	0.7
Eaton	346	4,155	1,247	445	51	16	1	0	6,261	0.2
Emmet	167	2,169	763	369	79	17	2	2	3,568	1.5
Genesee	1,124	16,602	6,733	2,579	353	75	22	4	27,492	0.2
Gladwin	126	1,908	643	325	17	2	0	0	3,021	0.1
Gogebic	78	1,856	268	43	16	2	0	0	2,263	1.6
Gd. Traverse	357	5,070	1,860	857	140	39	7	2	8,332	0.9
Gratiot	125	1,735	434	152	9	7	2	0	2,464	0.2
Hillsdale	159	2,190	645	225	4	1	0	0	3,224	0.2
Houghton	73	1,530	453	198	37	11	0	0	2,302	1.7
Huron	55	1,486	790	368	33	10	3	0	2,745	2.4
Ingham	828	8,691	3,012	1,044	155	58	16	2	13,806	0.2
Ionia	194	2,466	547	205	14	6	0	0	3,432	0.8
Iosco	175	2,667	844	327	30	7	1	1	4,052	1.3
Iron	179	1,623	166	68	5	2	0	0	2,043	1.7
Isabella	153	1,875	575	177	21	6	1	0	2,808	0.1
Jackson	564	7,171	2,474	1,160	63	17	2	0	11,451	0.5
Kalamazoo	1,057	9,350	2,973	1,083	216	50	20	2	14,751	0.2
Kalkaska	92	1,165	280	134	7	3	0	2	1,683	1.2
Kent	2,221	19,644	6,669	2,790	586	205	39	16	32,170	0.3
Keweenaw	9	188	80	29	3	3	0	0	312	22.2
Lake	63	691	895	53	7	3	1	0	1,713	0.5

Lapeer	258	2,539	878	329	32	10	1	0	4,047	0.4
Leelanau	103	2,075	784	310	37	18	5	0	3,332	1.1
Lenawee	261	4,003	1,544	544	30	5	0	0	6,387	0.2
Livingston	470	4,974	2,247	1,083	82	16	6	2	8,880	0.5
Luce	80	933	105	46	2	0	0	3	1,169	1.7
Mackinac	80	1,882	463	196	26	14	3	11	2,675	3.7
Macomb	1,499	14,943	10,355	7,536	1,719	494	103	21	36,670	0.2
Manistee	88	1,920	461	165	26	10	0	0	2,670	1.6
Marquette	309	3,725	852	262	39	9	3	0	5,199	0.9
Mason	123	2,079	535	218	36	10	3	2	3,006	2.6
Mecosta	165	2,269	624	275	10	9	0	3	3,355	0.7
Menominee	134	1,513	335	121	22	6	5	3	2,139	0.4
Midland	363	4,346	1,584	567	77	21	2	3	6,963	0.3
Missaukee	69	859	336	103	4	2	0	0	1,373	0.1
Monroe	250	3,792	2,669	1,288	181	46	7	3	8,236	0.6
Montcalm	289	3,167	659	252	21	7	0	0	4,395	0.7
Montmorency	140	1,169	140	113	15	2	0	0	1,579	1.6
Muskegon	434	7,193	2,548	1,210	197	49	16	2	11,649	0.4
Newaygo	168	2,743	848	335	36	5	1	1	4,137	0.4
Oakland	2,899	27,243	15,981	7,135	1,465	551	121	16	55,411	0.3
Oceana	92	1,306	273	113	23	1	1	1	1,810	2.0
Ogemaw	145	1,558	466	179	6	1	1	0	2,356	1.2
Ontonagon	21	795	146	50	7	1	0	0	1,020	0.3
Osceola	113	1,117	318	63	8	2	0	0	1,621	0.4
Oscoda	60	656	526	32	2	2	0	0	1,278	4.5
Otsego	102	1,333	273	135	11	7	3	0	1,869	1.1
Ottawa	737	7,688	3,204	1,670	322	90	24	4	13,739	0.4
Presque Isle	86	1,484	315	147	13	5	0	0	2,050	2.0
Roscommon	155	2,846	988	671	28	6	3	1	4,698	5.5
Saginaw	504	8,840	3,656	1,225	167	72	19	0	14,483	0.1
St. Clair	352	5,155	2,625	1,859	334	107	24	10	10,466	1.0
St. Joseph	446	4,398	1,220	338	22	9	3	1	6,437	1.2
Sanilac	68	1,001	390	121	21	6	2	0	1,609	0.8
Schoolcraft	44	1,204	179	50	2	1	4	0	1,484	1.0
Shiawassee	206	2,806	858	285	28	9	2	1	4,195	0.2
Tuscola	140	2,234	997	329	34	5	2	0	3,741	0.3
Van Buren	434	3,760	1,105	476	56	15	4	4	5,854	0.9
Washtenaw	685	7,192	3,147	1,113	156	63	8	2	12,366	1.0
Wayne	2,665	33,672	19,232	8,644	1,967	721	173	83	67,157	0.4
Wexford	125	1,827	1,228	186	16	5	3	0	3,390	0.7
Foreign	782	12,876	5,563	2,676	641	269	60	24	22,891	0.3
Unknown county	989	1,391	1,254	1,003	228	75	18	2	4,960	0.7
State totals	30,348	354,261	145,212	63,619	10,894	3,585	830	276	609,025	0.6

SOURCE: Michigan Department of State.

Table 14-5. Boat types by summer storage location, 1980.

Boat Type	All Locations (100%)	Great Lakes Waterfront Home (10.1%)	Inland Permanent Home (17.9%)	Inland Summer Home (18.7)	Non-Waterfront Site (43.3%)	Marina ¹ (6.5%)	Other (3.5%)
Small Outboards ($<16'$)	28.7%	28.5%	21.4%	30.3%	36.4%	3.8%	21.4%
Large Outboards ($\geq 16'$)	26.9	32.9	24.6	22.1	29.1	28.0	28.8
Cabin	5.5	16.8	0.9	0.3	1.9	37.3	8.4
Sail	7.2	9.3	7.3	8.4	3.6	25.5	7.1
Row	23.9	9.3	24.9	22.7	28.6	0.0	28.0
Pontoon	7.9	3.2	20.9	16.2	0.3	5.4	6.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

¹Includes commercial marinas, public marinas, and boat/yacht clubs.

NOTE: Overall sample size of the 1980 Michigan Recreational Boating Survey was 3,341.

SOURCE: Stynes, Daniel J. and David Safronoff. 1982. 1980 Michigan Recreational Boating Survey. Michigan Sea Grant Publication MICHU-SG-82-202. Ann Arbor, MI: Michigan Sea Grant Publications.

Table 14-6. Storage locations of registered boats in Michigan during the 1980 boating season.

PERMANENT RESIDENCE	
Great Lakes waterfront	6.5%
Inland lakes waterfront	17.9
Non-waterfront site	<u>40.0</u>
Sub-total	64.4%
SUMMER COTTAGE/SECOND HOME	
Great Lakes waterfront	3.6%
Inland lakes waterfront	18.7
Non-waterfront site	<u>1.8</u>
Sub-total	24.1%
COMMERCIAL MARINA	
Great Lakes waterfront	3.5%
Inland lakes waterfront	0.5
Non-waterfront site	<u>0.0</u>
Sub-total	4.0%
YACHT CLUB	
Great Lakes waterfront	0.9%
Inland lakes waterfront	0.4
Non-waterfront site	<u>0.0</u>
Sub-total	1.3%
PUBLIC MARINA	
Great Lakes waterfront	0.8%
Inland lakes waterfront	0.4
Non-waterfront site	<u>0.0</u>
Sub-total	1.2%
OTHER LOCATION	
Great Lakes waterfront	1.4%
Inland lakes waterfront	2.1
Non-waterfront site	<u>1.5</u>
Sub-total	5.0%
Grand Total	100.0%
ALL LOCATIONS COMBINED	
Great Lakes waterfront	16.8%
Inland lakes waterfront	39.9
Non-waterfront site	<u>43.3</u>
Total	100.0%

NOTE: Overall sample size of the 1980 Michigan Recreational Boating Survey was 3,341.

SOURCE: Stynes, Daniel J. and David Safronoff. 1982. 1980 Michigan Recreational Boating Survey. Michigan Sea Grant Publication MICHU-SG-82-202. Ann Arbor, MI: Michigan Sea Grant Publications.

Table 14-7. Estimated number of recreational boat-days that took place in each of Michigan's counties in 1980.

Rank	County	Great Lake Boat-Days	Rank	County	Inland Lake Boat-Days	Rank	County	Total Boat-Days
1	Macomb	779,037	1	Oakland	1,121,932	1	Oakland	1,121,932
2	Wayne	718,199	2	Livingston	552,919	2	Wayne	900,987
3	St. Clair	551,762	3	Barry	490,294	3	Macomb	809,173
4	Huron	369,183	4	Jackson	466,446	4	St. Clair	578,592
5	Bay	244,517	5	Cass	417,630	5	Livingston	552,397
6	Ottawa	228,518	6	Roscommon	364,675	6	Barry	490,294
7	Monroe	185,896	7	Cheboygan	319,393	7	Jackson	466,446
8	Muskegon	184,065	8	St. Joseph	316,595	8	Cass	417,630
9	Mackinac	168,930	9	Washtenaw	311,897	9	Huron	378,085
10	Arenac	157,731	10	Van Buren	305,484	10	Cheboygan	369,195
11	Grand Traverse	143,861	11	Kalamazoo	296,754	11	Ottawa	366,020
12	Chippewa	123,004	12	Newaygo	295,015	12	Roscommon	364,675
13	Manistee	102,410	13	Kent	289,298	13	Van Buren	346,112
14	Charlevoix	101,621	14	Branch	287,073	14	Muskegon	337,788
15	Berrien	100,543	15	Genesee	285,064	15	Grand Traverse	316,792
16	Delta	96,140	16	Montcalm	262,398	16	St. Joseph	316,595
17	Leelanau	93,228	17	Lenawee	254,397	17	Washtenaw	311,897
18	Iosco	90,827	18	Clare	184,393	18	Kalamazoo	296,754
19	Houghton	71,862	19	Mecosta	184,188	19	Newaygo	295,015
20	Sanilac	67,638	20	Wayne	182,788	20	Kent	289,298
21	Marquette	66,472	21	Allegan	182,086	21	Branch	287,073
22	Allegan	65,622	22	Antrim	180,571	22	Genesee	285,064
23	Alpena	62,859	23	Grand Traverse	172,931	23	Bay	263,335
24	Antrim	56,615	24	Muskegon	153,723	24	Montcalm	262,398
25	Oceana	55,464	25	Gladwin	152,605	25	Lenawee	254,397
26	Emmet	54,856	26	Schoolcraft	149,770	26	Mackinac	250,883
27	Benzie	54,708	27	Ogemaw	146,835	27	Allegan	247,708
28	Cheboygan	49,802	28	Ottawa	137,502	28	Antrim	237,186
29	Keweenaw	47,307	29	Leelanau	137,497	29	Berrien	231,093
30	Van Buren	40,628	30	Calhoun	136,421	30	Leelanau	230,725
31	Mason	38,928	31	Berrien	130,550	31	Charlevoix	210,143
32	Baraga	34,363	32	Mason	126,456	32	Iosco	204,416
33	Alcona	30,693	33	Otsego	121,218	33	Monroe	195,535
34	Alger	29,923	34	Presque Isle	118,789	34	Clare	184,393
35	Tuscola	15,167	35	Iosco	113,589	35	Mecosta	184,188
36	Menominee	13,986	36	Charlevoix	108,522	36	Manistee	160,147
37	Presque Isle	13,897	37	Lapeer	105,509	37	Arenac	176,377
38	Luce	13,145	38	Benzie	102,455	38	Mason	165,384
39	Ontonagon	12,130	39	Montmorency	99,902	39	Marquette	164,071
40	Schoolcraft	10,891	40	Marquette	97,599	40	Schoolcraft	160,661
41	Gogebic	5,236	41	Oceana	95,363	41	Benzie	157,163
	TOTAL	5,351,671	42	Emmet	94,323	42	Gladwin	152,605
			43	Alcona	91,948	43	Oceana	150,827
			44	Lake	90,093	44	Emmet	149,179
			45	Wexford	87,328	45	Ogemaw	146,835
			46	Mackinac	81,953	46	Chippewa	145,145

47 Iron	77,832	47 Calhoun	136,421
48 Manistee	77,737	48 Delta	133,792
49 Kalkaska	74,899	49 Presque Isle	132,686
50 Gogebic	66,085	50 Alcona	122,641
51 Missaukee	56,306	51 Otsego	121,218
52 Ionia	54,723	52 Alpena	112,537
53 Luce	50,045	53 Houghton	105,893
54 Alpena	49,678	54 Lapeer	105,509
55 Osceola	48,415	55 Montmorency	99,902
56 Isabella	41,845	56 Lake	90,093
57 Delta	37,652	57 Wexford	87,328
58 Houghton	34,031	58 Iron	77,832
59 Tuscola	33,155	59 Kalkaska	74,899
60 Oscoda	32,681	60 Gogebic	71,324
61 Ingham	30,746	61 Sanilac	68,317
62 Midland	30,334	62 Luce	63,190
63 Macomb	30,136	63 Missaukee	56,306
64 Dickinson	28,903	64 Alger	55,920
65 Crawford	28,418	65 Ionia	54,723
66 St. Clair	26,830	66 Keweenaw	52,462
67 Menominee	26,478	67 Osceola	48,415
68 Alger	25,997	68 Tuscola	48,322
69 Eaton	23,819	69 Isabella	41,845
70 Chippewa	22,141	70 Menominee	40,464
71 Hillsdale	21,870	71 Baraga	37,660
72 Saginaw	18,886	72 Oscoda	32,681
73 Bay	18,818	73 Ingham	30,746
74 Arenac	18,646	74 Midland	30,334
75 Ontonagon	17,217	75 Ontonagon	29,347
76 Clinton	15,982	76 Dickinson	28,903
77 Gratiot	15,141	77 Crawford	28,418
78 Monroe	9,639	78 Eaton	23,819
79 Huron	8,902	79 Hillsdale	21,870
80 Shiawassee	7,020	80 Saginaw	18,886
81 Keweenaw	5,155	81 Clinton	15,982
82 Baraga	3,297	82 Gratiot	15,141
83 Sanilac	679	83 Shiawassee	7,020
TOTAL	11,574,309	TOTAL	16,925,980

SOURCE: Stynes, Daniel J. and David Safronoff. 1982. 1980 Michigan Recreational Boating Survey. Michigan Sea Grant Publication MICHU-SG-82-202. Ann Arbor, MI: Michigan Sea Grant Publications.

Table 14-8. Number of recreational boat-days in Michigan by boat size class, 1980.

SIZE CLASS	BOAT-DAYS (000)	PERCENT
SMALL BOATS ($\leq 20'$)		
Used on Great Lakes and connecting waters	3,788	22.4
Used on inland lakes, rivers, and streams	<u>10,546</u>	<u>62.3</u>
Sub-total	14,334	84.7
LARGE BOATS ($>20'$)		
Used on Great Lakes and connecting waters	1,563	9.2
Used on inland lakes, rivers, and streams	<u>1,028</u>	<u>6.1</u>
Sub-total	2,591	15.3
Total	16,925	100.0

NOTE: Overall sample size of the 1980 Michigan Recreational Boating Survey was 3,341.

SOURCE: Stynes, Daniel J. and David Safronoff. 1982. 1980 Michigan Recreational Boating Survey. Michigan Sea Grant Publication MICHU-SG-82-202. Ann Arbor, MI: Michigan Sea Grant Publications.

Table 14-9. Trends in Michigan boating activity on Great Lakes and inland lakes, 1974-80.

	BOAT DAYS IN THOUSANDS			PERCENT CHANGE	
	1974	1977	1980	1974-1977	1977-1980
GREAT LAKES					
Small boats ($\leq 20'$)	2,293	2,849	3,788	24	33
Large boats ($>20'$)	<u>982</u>	<u>1,573</u>	<u>1,563</u>	60	-1
Total	3,275	4,422	5,351	35	21
INLAND LAKES					
Small boats ($\leq 20'$)	6,978	8,475	10,546	21	24
Large boats ($>20'$)	<u>386</u>	<u>885</u>	<u>1,028</u>	129	16
Total	7,364	9,361	11,574	27	24
Grand Total	10,639	13,783	16,925	29	23

NOTE: Overall sample size of the Michigan Recreational Boating Survey was 3,341.

SOURCE: Stynes, Daniel J. and David Safronoff. 1982. 1980 Michigan Recreational Boating Survey. Michigan Sea Grant Publication MICHU-SG-82-202. Ann Arbor, MI: Michigan Sea Grant Publications.

Table 14-10. Inventory of Michigan's Great Lakes recreational boating facilities by Great Lake served, 1983.

Facility	Lake Michigan	Lake Superior	Lake Huron	Lake St. Clair	Lake Erie	State Total
Number of Marinas	234	37	212	198	65	746
Number of Marina Slips						
Less than 20 feet	3,055	167	2,236	5,371	1,916	12,745
20-30 feet	3,715	186	2,477	5,399	2,467	14,244
30-40 feet	1,974	63	1,046	2,365	740	6,188
More than 40 feet	1,250	85	705	1,199	235	3,474
Total	9,994	501	6,464	14,334	5,358	36,651
No. Buoy Moorings	561	5	53	0	0	619
Feet of Broadside Mooring	31,656	1,0248	34,500	22,560	6,744	105,708
Number of marinas with...						
Launch Ramp Facilities	97	24	129	70	37	357
Haul-out Facilities	55	7	29	69	21	181
Open dry storage facilities	122	20	120	95	39	396
Covered dry storage facilities	77	10	67	68	22	244

NOTE: Data are based on aerial photographs taken June-September, 1983. Data in this table are fully comparable with data in Table 14-11.

SOURCE: Molecek, Donald F. and Gene L. Brothers. 1983. Documentation and Analysis of Temporal and Spatial Changes in Marinas Serving Michigan's Great Lakes. Report prepared for Waterways Division and Land Resource Programs Division, Michigan Department of Natural Resources. East Lansing: Dept. of Park and Recreation Resources, Michigan State University.

Table 14-11. Inventory of Michigan's Great Lakes recreational boating facilities by Great Lake served, 1978.

Facility	Lake Michigan	Lake Superior	Lake Huron	Lake St. Clair	Lake Erie	State Totals
Number of Marinas	213	34	204	189	55	695
Number of Marina Slips						
Less than 20 feet	2,922	181	2,178	5,130	1,471	11,882
20-30 feet	2,549	150	1,796	4,662	1,769	10,926
30-40 feet	1,227	69	764	2,054	581	4,695
More than 40 feet	1,032	70	675	1,071	160	3,008
Total	7,730	470	5,413	12,917	3,981	30,511
Number of Buoy Moorings	456	4	37	0	0	497
Feet of Broadside Mooring	36,712	10,452	35,760	24,792	7,696	115,412
Number of marinas with...						
Launch ramp facilities	89	22	125	70	36	342
Haul-out facilities	48	7	27	67	21	170
Open dry storage facilities	116	19	116	96	37	384
Covered dry storage facilities	77	10	66	68	21	242

NOTE: Data are based on aerial photographs taken in 1978. Data in this table are fully comparable with data in Table 14-10.

SOURCE: Molecek, Donald F. and Gene L. Brothers. 1983. Documentation and Analysis of Temporal and Spatial Changes in Marinas Serving Michigan's Great Lakes. Report prepared for Waterways Division and Land Resource Programs Division, Michigan Department of Natural Resources. East Lansing: Dept. of Park and Recreation Resources, Michigan State University.

Table 14-12. Inventory of Great Lakes recreational boating facilities by Michigan county, 1983.

County	NO. MARINAS	NUMBER OF MARINA SLIPS					No. Buoy Moorings	Feet of Broadside Mooring	NUMBER OF MARINAS WITH...			
		<20'	20'-30'	30'-40'	>40'	Total			Launch Ramp Facilities	Haul Out Facilities	Open Dry Stor- age Facilities	Covered Dry Storage Facilities
Alcona	1	0	0	0	14	14	0	0	1	0	1	0
Alger	2	0	0	0	0	0	5	1,248	2	1	2	2
Allegan	18	200	54	127	329	710	0	528	0	3	9	6
Alpena	3	6	4	63	85	158	0	624	3	2	3	3
Antrim	2	44	12	0	12	68	6	0	1	0	1	0
Arenac	10	271	120	16	18	425	0	1,752	8	0	6	3
Baraga	4	54	73	6	0	133	0	264	4	0	4	0
Bay	17	188	781	347	255	1,571	0	1,584	11	6	13	9
Benzie	7	9	121	48	26	204	15	936	2	1	4	2
Berrien	12	850	492	304	118	1,764	19	1,296	6	6	8	7
Charlevoix	29	159	217	228	115	719	59	2,736	12	5	10	7
Cheboygan	7	48	95	55	17	215	0	1,608	5	4	6	6
Chippewa	61	515	212	68	13	808	0	9,480	44	2	42	15
Delta	16	84	43	20	0	147	32	5,016	10	1	9	3
Emmet	7	152	62	96	71	381	64	1,752	2	3	4	4
Gogebic	2	0	0	0	0	0	0	1,296	1	0	0	0
Gr. Traverse	3	57	107	11	0	175	0	1,128	1	0	0	1
Houghton	14	34	44	31	52	161	0	1,728	6	2	7	4
Huron	30	492	243	83	65	883	0	2,904	18	5	19	10
Iosco	14	319	228	84	0	631	9	4,716	8	2	10	7
Keweenaw	6	14	4	0	0	18	0	1,536	4	0	0	0
Leelanau	11	26	271	87	33	417	77	1,248	7	4	5	3
Luce	0	0	0	0	0	0	0	0	0	0	0	0
Mackinac	41	321	120	30	86	557	34	7,320	22	2	11	5
Macomb	85	3,279	3,046	1,174	452	7,951	0	10,224	36	37	44	33
Manistee	20	295	254	39	41	629	0	2,520	10	4	13	6
Marquette	4	39	50	16	9	114	0	3,696	3	2	2	2
Mason	9	49	182	102	9	342	0	1,824	3	1	6	4
Menominee	3	0	8	25	8	41	45	936	1	0	1	1
Monroe	32	1,229	1,172	298	111	2,810	0	4,080	22	10	21	13
Muskegon	23	501	388	130	103	1,122	193	2,952	10	6	12	9
Oceana	9	49	48	38	36	171	3	2,280	5	1	4	4
Ontonagon	2	13	15	4	21	53	0	168	1	1	2	0
Ottawa	42	327	1,121	700	269	2,417	48	3,576	18	17	23	15
Presque Isle	3	12	22	40	18	92	0	960	3	0	2	2
St. Clair	94	1,052	1,567	787	251	3,657	0	11,352	29	22	39	33
Sanilac	3	13	98	48	28	187	0	888	1	1	2	2
Schoolcraft	1	0	11	0	12	23	0	72	0	0	0	0
Tuscola	4	44	96	6	0	146	0	0	2	1	2	1
Van Buren	17	222	322	11	66	621	0	2,256	6	3	11	4
Wayne	78	1,778	2,541	1,066	731	6,116	0	7,224	29	26	38	18
Total	746	12,745	14,244	6,188	3,474	36,651	619	105,708	357	181	396	244

NOTE: Data are based on aerial photographs taken June-September, 1983. Data in this table are fully comparable with data in Table 14-13.

SOURCE: Holecek, Donald F. and Gene L. Brothers. 1983. Documentation and Analysis of Temporal and Spatial Changes in Marinas Serving Michigan's Great Lakes. Report prepared for Waterways Division and Land Resource Programs Division, Michigan Department of Natural Resources. East Lansing: Dept. of Park and Recreation Resources, Michigan State University.

Table 14-13. Inventory of Great Lakes recreational boating facilities by Michigan county, 1978.

County	NO. MARINAS	NUMBER OF MARINA SLIPS					No. Buoy Moorings	Feet of Broadside Mooring	NUMBER OF MARINAS WITH ...			
		<20'	20'-30'	30'-40'	>40'	Total			Launch Ramp Facilities	Haul Out Facilities	Open Dry Stor- age Facilities	Covered Dry Stor- age Facilities
Alcona	1	0	0	0	14	14	0	0	1	0	1	0
Alger	2	0	0	0	0	0	4	1,848	2	1	2	2
Allegan	14	178	54	102	327	661	0	528	0	3	9	6
Alpena	3	18	4	63	85	170	0	624	3	2	3	3
Antrim	2	44	12	0	12	68	6	0	1	0	1	0
Arenac	10	222	30	7	26	285	0	2,208	8	0	6	3
Baraga	3	66	49	0	0	115	0	192	3	0	3	0
Bay	15	182	608	225	248	1,263	0	2,248	9	4	10	7
Benzie	5	2	87	8	0	97	6	840	2	0	4	2
Benzie	5	2	87	8	0	97	6	840	2	0	4	2
Berrien	11	659	329	231	75	1,294	19	1,320	3	3	6	5
Charlevoix	25	168	118	114	80	480	54	2,400	10	5	8	7
Cheboygan	7	46	95	55	17	213	0	1,608	5	4	6	6
Chippewa	62	518	149	69	12	748	0	8,952	44	2	62	15
Delta	16	81	24	14	0	119	32	5,544	10	1	9	4
Emmet	7	165	62	87	63	377	64	2,136	2	3	4	4
Gogebic	2	0	0	0	0	0	0	1,296	1	0	0	0
Gr. Traverse	3	57	107	11	0	175	0	1,128	1	0	0	1
Houghton	13	50	44	31	52	177	0	1,168	6	2	7	4
Huron	29	539	238	53	52	882	0	2,760	18	5	18	10
Iosco	12	267	116	9	2	394	0	6,960	6	2	8	6
Keweenaw	5	0	4	0	0	4	0	1,536	3	0	0	0
Leelanau	10	36	117	94	40	287	63	1,536	7	3	5	3
Luce	0	0	0	0	0	0	0	0	0	0	0	0
Mackinac	40	301	109	32	78	520	27	6,984	21	2	12	6
Macomb	82	3,025	2,524	1,042	418	7,009	0	9,912	35	36	44	34
Manistee	18	249	168	27	36	480	0	3,624	10	4	12	6
Marquette	4	39	50	16	9	114	0	3,696	3	2	2	2
Mason	7	37	94	0	2	133	0	1,704	2	1	5	4
Merominee	3	6	8	25	8	47	45	864	1	0	1	1
Monroe	27	823	739	211	61	1,834	0	3,480	19	9	18	11
Muskegon	20	485	305	59	89	938	119	3,528	9	6	12	9
Oceana	8	59	45	34	20	158	0	2,496	5	1	4	4
Ontonagon	2	13	3	16	6	38	0	404	1	1	2	0
Ottawa	42	460	866	409	202	1,937	48	5,088	17	15	23	15
Presque Isle	3	12	22	40	18	92	0	1,152	3	0	2	2
St. Clair	89	1,081	1,288	628	249	3,246	0	12,720	31	23	43	34
Sanilac	2	10	4	26	17	57	10	744	1	1	2	2
Schoolcraft	1	0	11	0	12	23	0	72	0	0	0	0
Tuscola	4	44	96	6	0	146	0	0	2	1	2	1
Van Buren	16	213	140	4	64	421	0	2,304	6	3	11	5
Wayne	70	1,727	2,207	947	614	5,495	0	9,808	31	25	37	18
Total	695	11,882	10,926	4,695	3,008	30,511	497	115,412	342	170	384	242

NOTE: Data are based on aerial photographs taken in 1978. Data in this table are fully comparable with data in Table 14-12.

SOURCE: Molecek, Donald F. and Gene L. Brothers. 1983. Documentation and Analysis of Temporal and Spatial Changes in Marinas Serving Michigan's Great Lakes. Report prepared for Waterways Division and Land Resources Programs Division, Michigan Department of Natural Resources. East Lansing: Dept. of Park and Recreation Resources, Michigan State University.

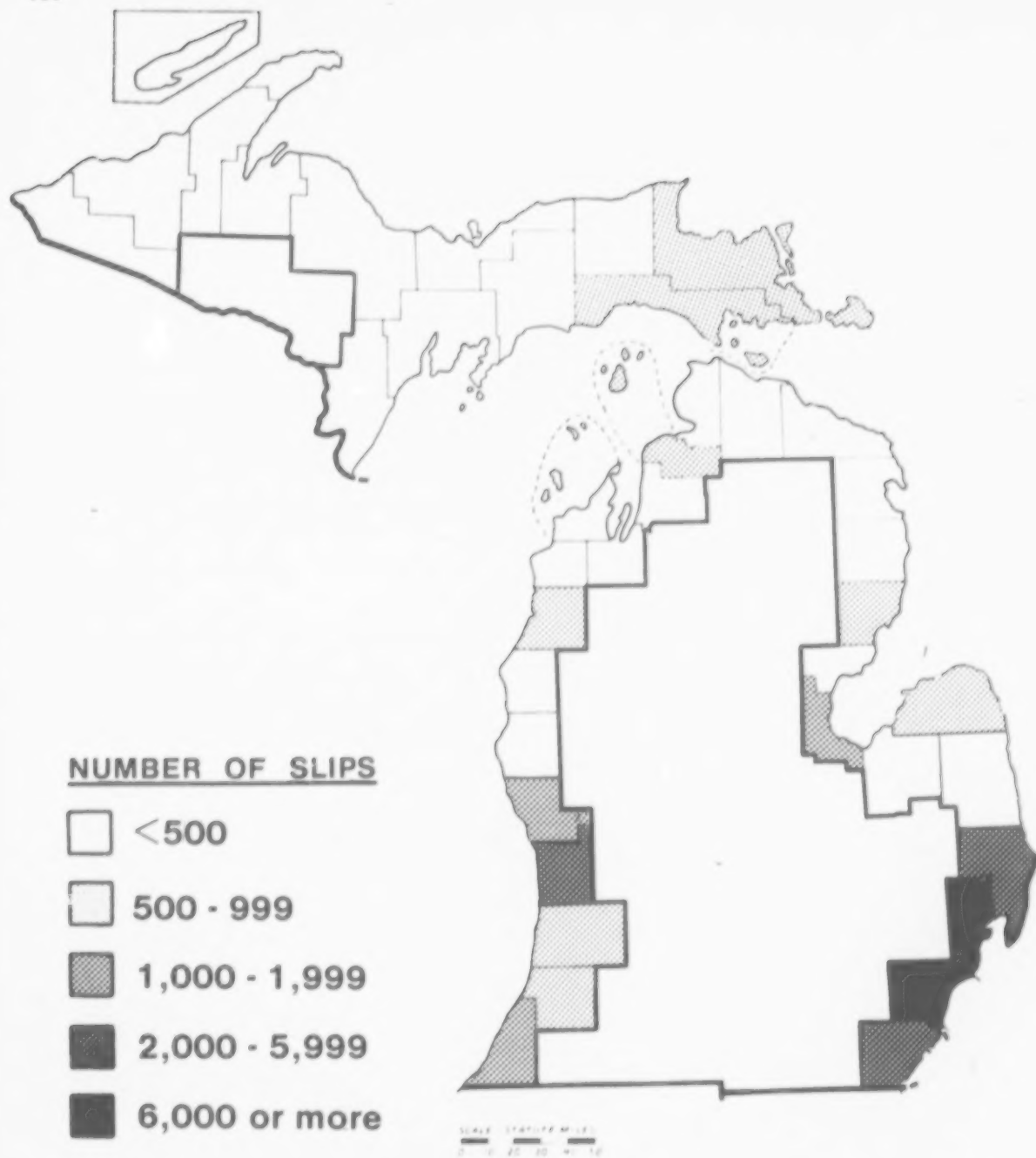


Figure 14-1. Total number of Great Lake marina slips by Michigan county, 1983.

SOURCE: Holecek, Donald F. and Gene L. Brothers. 1983. Documentation and Analysis of Temporal and Spatial Changes in Marinas Serving Michigan's Great Lakes. Report to Michigan Department of Natural Resources. East Lansing: Department of Park and Recreation Resources, Michigan State University.

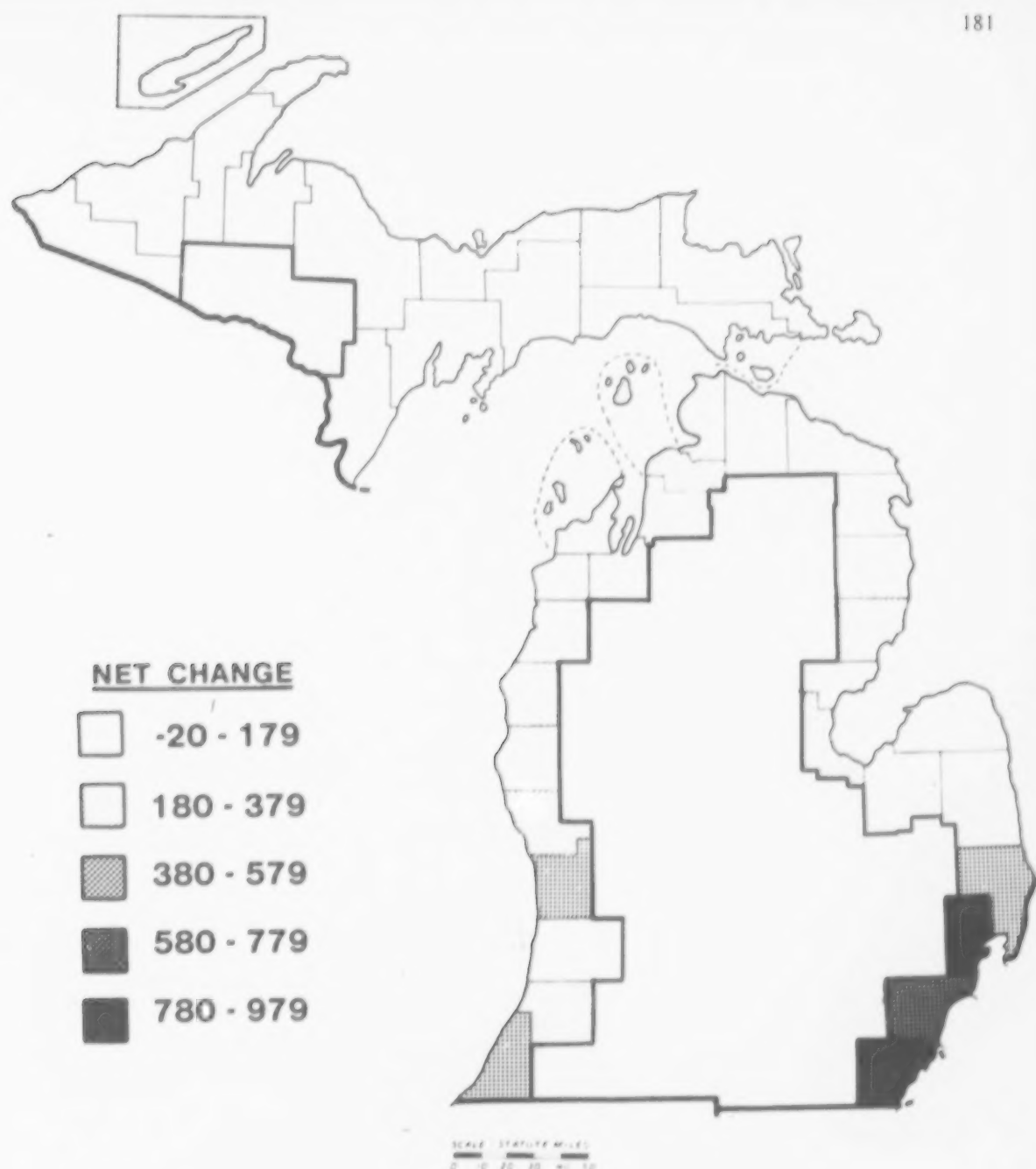


Figure 14-2. Net change in total number of Great Lake marina slips by Michigan county, 1978-83.

SOURCE: Holecek, Donald F. and Gene L. Brothers. 1983. Documentation and Analysis of Temporal and Spatial Changes in Marinas Serving Michigan's Great Lakes. Report to Michigan Department of Natural Resources. East Lansing: Department of Park and Recreation Resources, Michigan State University.



Figure 14-3. Location of Great Lake recreational harbors in Michigan, 1985.

SOURCE: Michigan Department of Natural Resources, 1985. Michigan Harbors Guide 1985. Lansing, MI: Michigan Dept. of Natural Resources, Waterways Division.

Table 14-14. Marine sales by state, 1983.

BOATS			OUTBOARD MOTORS			BOAT TRAILERS			MARINE ACCESSORIES					
Rank	State	Sales (\$000)	Rank	State	Sales (\$000)	Rank	State	Sales (\$000)	Rank	State	Sales (\$000)	Rank	State	TOTAL (\$000)
1	FL	390,149	1	FL	86,327	1	FL	10,703	1	MI	54,230	1	FL	524,662
2	NY	235,879	2	CA	67,051	2	CA	8,513	2	MN	47,280	2	CA	329,357
3	CA	208,506	3	MN	56,866	3	MN	7,540	3	CA	45,287	3	NY	309,348
4	MI	192,269	4	TX	50,664	4	TX	7,053	4	TX	45,086	4	MI	286,183
5	TX	153,440	5	IL	49,154	5	IL	6,692	5	FL	37,483	5	TX	256,243
6	OH	104,029	6	WI	45,039	6	WI	5,696	6	WI	32,125	6	MN	182,341
7	NJ	96,998	7	NY	44,879	7	MO	5,474	7	LA	25,862	7	OH	156,634
8	MA	88,398	8	MO	36,625	8	MI	4,987	8	OH	25,580	8	IL	151,225
9	MD	87,964	9	MI	34,697	9	IN	4,378	9	NY	24,941	9	WI	147,798
10	IL	75,355	10	LA	30,841	10	LA	4,014	10	MO	21,745	10	MA	126,947
11	MN	70,655	11	IN	28,914	11	OH	3,893	11	AR	21,202	11	NJ	125,231
12	WI	64,938	12	PA	26,987	12	NY	3,649	12	IL	20,024	12	MO	113,487
13	VA	62,431	13	WA	24,095	13	PA	3,163	13	AL	17,615	13	MO	112,502
14	CT	59,008	14	OH	23,132	14	GA	3,163	14	GA	16,059	14	IN	104,951
15	IN	58,465	15	MA	23,132	15	WA	3,041	15	SC	15,739	15	VA	96,050
16	MO	49,643	16	GA	22,168	16	NC	2,919	16	PA	15,310	16	PA	94,699
17	PA	49,239	17	CT	22,167	17	AL	2,676	17	NC	14,802	17	CT	88,319
18	GA	37,073	18	NC	21,204	18	VA	2,555	18	WA	14,664	18	LA	85,933
19	ME	34,167	19	VA	20,240	19	AZ	2,311	19	OK	14,577	19	GA	78,463
20	WA	32,473	20	AL	19,276	20	IA	1,946	20	TN	14,556	20	WA	74,273
21	NC	31,478	21	OR	16,385	21	KY	1,946	21	IA	14,290	21	NC	70,403
22	OR	31,439	22	NJ	16,385	22	CT	1,946	22	MA	14,079	22	AL	68,102
23	AL	28,535	23	AZ	16,108	23	NJ	1,703	23	IN	13,194	23	OR	60,069
24	OK	28,425	24	KY	15,421	24	SC	1,702	24	VA	10,824	24	OK	56,148
25	LA	25,216	25	IA	15,421	25	TN	1,792	25	MO	10,671	25	SC	53,216
26	AZ	23,502	26	TN	14,457	26	OR	1,581	26	OR	10,664	26	AZ	49,890
27	DE	22,728	27	SC	14,457	27	OK	1,581	27	NJ	10,145	27	ME	49,762
28	SC	21,318	28	MO	12,529	28	KS	1,459	28	MS	9,096	28	IA	49,464
29	KY	20,880	29	OK	11,565	29	MA	1,338	29	ME	9,082	29	KY	47,204
30	CO	18,906	30	AR	11,565	30	MO	1,338	30	KY	8,957	30	AR	46,400
31	UT	17,965	31	KS	9,639	31	CO	1,217	31	AZ	7,969	31	TN	45,596
32	VT	17,856	32	SD	9,639	32	SD	1,217	32	KS	6,252	32	CO	31,541
33	IA	17,807	33	CO	6,747	33	AR	1,180	33	CT	5,198	33	DE	30,569
34	NH	16,953	34	ND	5,783	34	WV	730	34	ID	4,897	34	MS	29,664
35	RI	15,564	35	ME	5,783	35	ND	730	35	CO	4,671	35	KS	29,045
36	TN	14,881	36	MS	5,782	36	ME	730	36	WV	3,745	36	UT	26,962
37	MS	14,056	37	RI	5,782	37	MS	730	37	UT	3,693	37	RI	23,542
38	NV	13,228	38	DE	4,819	38	NE	730	38	NE	3,434	38	VT	23,125
39	AR	12,453	39	NH	4,819	39	ID	608	39	DE	2,701	39	NH	22,664
40	KS	11,695	40	WV	4,819	40	NM	486	40	ND	2,651	40	SD	22,231
41	DC	10,578	41	UT	4,818	41	NV	486	41	MT	2,353	41	ND	19,006
42	ND	9,842	42	ID	3,855	42	UT	486	42	NV	2,282	42	NV	17,924
43	SD	9,110	43	NE	2,893	43	NH	365	43	SD	2,265	43	ID	16,544
44	NE	8,888	44	NM	2,892	44	MT	365	44	NM	2,202	44	NE	15,945
45	ID	7,184	45	VT	2,892	45	VT	244	45	VT	2,133	45	WV	14,313
46	MT	5,427	46	NV	1,928	46	RI	244	46	RI	1,952	46	DC	11,208
47	WV	5,019	47	MT	1,927	47	WY	244	47	WY	1,417	47	NM	10,082
48	NM	4,502	48	WY	964	48	DE	121	48	NH	527	48	MT	10,072
49	WY	3,577	49	DC	288	49	DC	49	49	DC	293	49	WY	6,202
TOTAL		2,620,091	TOTAL		963,820	TOTAL		121,624	TOTAL		695,804	TOTAL		4,401,339

SOURCE: National Marine Manufacturers Association. n.d. Boating 1984: A statistical report on America's top family sports. Chicago: National Marine Manufacturers Association.

Table 14-15. Dollar volume of boating equipment sales in Michigan, 1980-1983.

YEAR	Boats ¹ (\$000)	Outboard Motors (\$000)	Boat Trailers (\$000)	Marine Accessories (\$000)	Sum of the 4 Categories (\$000)
1980	104,670	28,829	3,839	41,400	178,738
1981	134,681	25,128	4,059	51,717	215,585
1982	133,922	27,319	4,074	46,804	212,119
1983	192,269	34,697	4,987	54,230	286,183

¹Retail value of inboard boats, inboard/outdrive boats, and auxiliary and non-powered sailboats.

SOURCE: National Marine Manufacturers Association. "Boating [Year]: A statistical report on America's top family sport," annual. Chicago: National Marine Manufacturers Association.

Table 14-16. Boating activity and spending by craft type, 1981.

	OPEN<16'	OPEN≥16'	TYPE OF CRAFT		PONTOON	ALL CRAFT
			CABIN	SAIL		
1. Active registered boats (1980)	267,451	136,837	28,182	36,523	40,024	509,017
2. percent	53	27	6	7	8	100
3. Average Number of days boated (1980)	29	38	43	36	39	33
4. Total boat days (000's)	7,651	5,228	1,196	1,292	1,558	16,925
5. percent	45	31	7	8	9	100
6. Average craft-related spending (per boat)	\$232	\$735	\$1,515	\$670	\$231	\$469
7. Average trip-related spending (per boat day)	\$27	\$58	\$63	\$23	\$39	\$39
8. Total craft-related spending (000's)	\$62,076	\$100,596	\$42,421	\$24,570	\$9,178	\$238,842
9. Total trip-related spending (000's)	\$205,838	\$299,182	\$75,805	\$29,937	\$60,002	\$670,764
10. Total spending (000)	\$267,914	\$399,779	\$118,226	\$54,506	\$69,179	\$909,605
11. percent	29	44	13	6	8	100
12. Average Total spending per boat per year	\$1,002	\$2,921	\$4,195	\$1,492	\$1,728	\$1,787

NOTE: These figures do not include purchases of new and used boats, estimated to be \$104 million in 1981.

SOURCE: Stynes, Daniel J., Gene L. Brothers, Donald F. Holecsek, and Dave Verbyla. 1983. Spending Patterns and Economic Impacts of Michigan Registered Boat Owners. Michigan Sea Grant Publication MICHU-SG-83-210. Ann Arbor, MI: Michigan Sea Grant Publications.

Table 14-17. Selected characteristics of boat dealers in Michigan (SIC 555), 1974-1983.

Year	Number of employees for week including March 12	Annual Payroll (\$000)	Number of establishments	Percentage of establishments employing . . .								
				1-4 persons	5-9 persons	10-19 persons	20-49 persons	50-99 persons	100-249 persons	250-499 persons	500-999 persons	1000+ persons
1974	1,034	8,739	197	61.9	23.3	12.2	2.5	0.0	0.00	0.00	0.0	0.0
1975	928	9,138	196	68.9	19.4	8.7	3.1	0.0	0.00	0.00	0.0	0.0
1976	1,029	11,062	198	67.7	18.2	11.6	2.5	0.0	0.00	0.00	0.0	0.0
1977	1,171	14,054	217	64.1	21.7	9.2	5.1	0.0	0.00	0.00	0.0	0.0
1978	1,253	15,754	215	60.5	23.3	10.7	5.1	0.5	0.00	0.00	0.0	0.0
1979	1,455	16,979	195	53.3	28.2	11.3	6.7	0.5	0.00	0.00	0.0	0.0
1980	1,066	15,033	187	63.6	20.9	10.2	5.3	0.0	0.00	0.00	0.0	0.0
1981	1,021	15,435	183	69.9	14.7	9.3	5.5	0.5	0.00	0.00	0.0	0.0
1982	1,000	15,658	185	67.0	17.8	10.3	4.9	0.0	0.00	0.00	0.0	0.0
1983	982	18,219	196	66.8	16.3	12.2	4.6	0.0	0.00	0.00	0.0	0.0

NOTE: Prior to 1983, establishment counts were based on a determination of active status as of December 15 of a given year. Beginning with 1983, establishment counts were based on a determination of active status as of anytime during the year. All data in this table cover only establishments that paid Social Security (FICA) taxes.

SOURCE: U.S. Department of Commerce, Bureau of the Census. County Business Patterns: Michigan. Annual, Table 1B.

Table 14-18. Attendance at and sales volume of the Detroit Boat and Fishing Show, 1981-1985.

Category	1981	1982	1983	1984	1985
Attendance	68,789	73,986	113,084	130,285	132,350
Units sold					
Power	427	435	750	1,871	2,116
Sail	52	110	125	203	316
Total	479	545	875	2,074	2,432
Sales Volume (\$ millions)	6.2	7.2	12.6	39.4	42.5
Average Length (feet)	21.5	27.16	24.0	26.5	23.16
Average Cost	\$12,907	\$13,253	\$14,514	\$19,032	\$17,449
Average Cost per foot	\$600.33	\$487.96	\$604.75	\$718.18	\$753.41

SOURCE: Michigan Boating Industries Association.

CHAPTER 15

RECREATIONAL FISHING IN MICHIGAN

Edward M. Mahoney, Douglas B. Jester, Jr., and Gale C. Jansen

Introduction

Michigan's extensive water resources provide an abundance of quality sportfishing opportunities. Sportfishing is a popular recreational activity which annually attracts large numbers of tourists to the state and has a significant impact on Michigan's economy.

In 1984, 1,356,834 people were licensed to fish in Michigan. This included 839,582 resident license holders, 72,836 nonresident annual license holders, and 49,676 nonresident husband and wife license holders (Table 15-1). Children under 17 and the spouses of licensed resident anglers are not required to buy licenses. Revenues from the sale of fishing licenses totalled approximately \$12 million for the 1984 license year. Approximately \$9.5 million of this was spent by the Fisheries Division of the Michigan Department of Natural Resources (DNR).

Table 15-2 shows the number of resident and nonresident fishing license holders during each of the years 1963-1983. The number of anglers reached a high of 1.5 million in 1980 and remained relatively constant in succeeding years. Resident license holders have increased 48% since 1963. The number of licensed resident anglers has remained relatively constant since 1973. The number of nonresident license holders increased 80% between 1963 and 1983.

Almost half (44%) of licensed resident anglers reside in seven counties in southern Michigan: Wayne, Oakland, Macomb, Genesee, Kent, Ingham, and Saginaw (Table 15-3). Over a quarter live in Wayne (13.9%), Oakland (7.8%), and Macomb (5%) counties. However, fishing licenses per capita are low in these and other urban counties. The number of fishing licenses per capita is higher in rural counties that have access to quality fishing opportunities.

Eighty percent of the nonresident license holders reside in the surrounding Great Lakes states (Table 15-4). Thirty-one percent live in Ohio, 24% in Indiana, 15% in Illinois, and 10% in Wisconsin.

The most recent data on sport fishing effort in Michigan are for the year 1981. Preliminary information from recent Fisheries Division surveys indicates that the volume and distribution of effort has remained relatively constant since 1981. During 1981 approximately 86% of the licensed anglers fished at least once (Table 15-5). It was estimated that these anglers logged 23.4 million angler-days of fishing. An angler-day is a day, or any part of a day, during which someone fishes. Nine million angler-days (39%) took place on the Great Lakes, 10.5 million angler-days (45%) took place on inland lakes, and 3.9 million angler-days (16%) took place on streams/rivers. Fifty-three percent of the angler-days occurred in DNR Region III, 35% in Region II, and 12% in Region I.

A Profile of Resident and Nonresident Anglers

To better understand the characteristics, preferences, and behavior of Michigan anglers, the Fisheries Division conducted a mail survey of fishing license holders in 1984

Table 15-1. Fishing license sales and revenues, 1984 license year.

License Type	Fee	Number	Revenue
Resident Annual ^a	\$ 7.25	839,582	\$ 6,086,970
Resident Senior	1.00	127,365	127,365
Nonresident Annual	15.25	72,836	1,110,749
Nonresident Husband and Wife	20.25	49,676 ^b	1,005,939
Daily	3.75	186,749	700,309
Trout Stamps	7.25	364,873	2,645,329
Sportsman ^c	7.25	30,950	224,388
Total			\$11,901,049

^aSpouses fish for free on resident licenses.

^bNonresident husband and wife licenses count as two licensed anglers.

^cSportsman licenses which sell for \$31.25 include hunting and fishing. Persons are still required to purchase a trout stamp to fish for trout or salmon. \$7.25 represents the cost of a resident fishing license.

Table 15-2. Michigan fishing license sales, 1963-83.

Year	Resident	Nonresident	Total
1963	711,311	186,417	897,728
1964	705,209	181,947	887,156
1965	723,189	185,064	908,253
1966	743,444	183,653	927,097
1967	781,136	192,031	973,167
1968	894,067	188,476	1,082,543
1969	902,318	184,680	1,086,998
1970	904,306	195,548	1,099,854
1971	953,840	204,949	1,158,789
1972	975,335	206,748	1,182,083
1973	1,034,660	226,838	1,261,498
1974	1,092,524	232,423	1,324,947
1975	1,135,143	250,172	1,385,315
1976	1,077,559	269,919	1,347,478
1977	1,061,325	288,407	1,349,732
1978	1,086,416	299,106	1,385,522
1979	1,098,933	320,292	1,419,225
1980	1,088,426	369,069	1,457,495
1981	1,053,473	322,844	1,376,317
1982	1,056,228	334,758	1,390,986
1983	1,056,100	335,415	1,391,515

SOURCE: Michigan Department of Natural Resources.

Table 15-3. Number of resident annual fishing licences by Michigan county, 1984 license year.

County	Licenses	Percent of State Licenses	Percent of State Population (1980)	Survey Responses
Alcona	2,012	.24	.11	.40
Alger	1,882	.22	.09	.30
Allegan	9,948	1.20	.90	1.30
Alpena	6,073	.70	.34	.70
Antrim	2,725	.33	.18	.40
Arenac	3,055	.37	.17	.20
Baraga	1,247	.15	.09	.20
Barry	4,687	.56	.50	1.00
Bay	17,014	2.00	1.30	1.60
Benzie	1,979	.24	.12	.20
Berrien	20,616	2.47	1.81	2.30
Branch	5,491	.66	.43	.80
Calhoun	15,300	1.80	1.53	1.40
Cass	5,482	.66	.51	.60
Charlevoix	3,520	.40	.22	.40
Cheboygan	3,605	.40	.23	.50
Chippewa	4,074	.50	.32	.70
Clare	4,685	.56	.27	.50
Clinton	5,771	.70	.60	.80
Crawford	1,747	.20	.11	.30
Delta	6,651	.79	.43	.70
Dickinson	4,349	.52	.28	.80
Eaton	8,594	1.30	.96	1.00
Emmet	3,761	.45	.26	.20
Genesee	45,537	5.40	4.84	4.40
Gladwin	3,952	.47	.23	.70
Gogebic	3,526	.42	.21	.40
Grand Traverse	8,386	1.00	.62	.90
Gratiot	5,377	.60	.44	.70
Hillsdale	5,287	.63	.46	.50
Houghton	4,194	.50	.42	.60
Huron	5,923	.70	.39	.80
Ingham	26,480	3.20	3.00	2.40
Ionia	6,590	.79	.57	.70
Iosco	4,946	.60	.33	.60
Iron	2,795	.33	.15	.40
Isabella	4,517	.54	.60	.60
Jackson	13,966	1.68	1.62	1.70
Kalamazoo	18,737	2.25	2.38	3.10
Kalkaska	1,768	.20	.12	.10
Kent	41,566	5.00	5.03	5.30
Keweenaw	316	.04	.02	.03
Lake	1,357	.16	.09	.20
Lapeer	7,537	.90	.75	.90
Leelanau	1,698	.20	.16	.20
Lenawee	9,475	1.10	.96	1.20
Livingston	8,611	1.00	1.06	.80
Luce	1,389	.16	.07	.20
Mackinac	1,842	.22	.11	.30
Macomb	41,613	5.00	7.51	7.40

Table 15-3. Number of resident annual fishing licences by Michigan county, 1984 license year (continued).

County	Licenses	Percent of State Licenses	Percent of State Population	Survey Responses
Manistee	3,870	.46	.24	.40
Marquette	9,628	1.20	.79	1.40
Mason	3,729	.45	.29	.30
Mecosta	4,155	.50	.40	.50
Menominee	4,345	.50	.28	.40
Midland	10,314	1.20	.81	1.20
Missaukee	1,594	.19	.20	.20
Monroe	13,293	1.60	1.41	1.70
Montcalm	7,864	.94	.54	1.10
Montmorency	1,954	.23	.09	.20
Muskegon	18,021	2.20	1.71	2.20
Newago	4,522	.54	.39	.70
Oakland	64,982	7.80	10.99	6.90
Oceana	2,821	.33	.24	.50
Ogemaw	2,860	.34	.18	.40
Ontonogan	1,848	.22	.11	.30
Osceola	3,186	.38	.22	.30
Oscoda	1,155	.14	.07	.10
Otsego	2,679	.32	.17	.50
Ottawa	19,565	2.30	1.76	2.20
Presque Isle	2,707	.32	.15	.30
Roscommon	4,208	.50	.19	.60
Saginaw	26,703	3.20	2.40	3.50
St. Clair	15,723	1.90	1.51	1.60
St. Joseph	7,440	.90	.62	1.20
Sanilac	4,887	.58	.43	.50
Schoolcraft	1,718	.20	.09	.20
Shiawassee	8,876	1.10	.75	1.10
Tuscola	8,767	1.10	.60	1.00
Van Buren	9,155	1.10	.73	1.00
Washtenaw	18,578	2.30	2.94	1.70
Wayne	116,521	13.90	24.60	13.00
Wexford	4,001	.48	.28	.70

SOURCE: Michigan Department of Natural Resources.

Table 15-4. Distribution of nonresident license holders by state.

State of Residence	Percent
Ohio	30.7
Indiana	24.4
Illinois	15.1
Wisconsin	9.8
Other	20.0
Total	100.0

Table 15-5. Estimates of sport fishing effort (angler-days) in Michigan, 1981.

Licensed Anglers	1,376,317
License holders who fished	1,187,000
Total Angler-Days	23.4 million
Angler-Days for Great Lakes	
Fish (Open-Water & Streams)	9.0 million
Angler-Days: Great Lakes Salmon & Trout (Open Water)	2.57 million
Angler-Days: Great Lakes Non-Salmonid (Open Water)	4.69 million
Angler-Days on each Great Lake & Watershed for Great Lakes Fish	
Lake Michigan	4.0 million
Lake Superior	.4 million
Lake Huron	2.1 million
Lake St. Clair	2.0 million
Lake Erie	.5 million
	9.0 million
Angler-Days Inland	14.4 million
Angler-Days: Inland Lakes	10.5 million
Angler-Days: Inland Streams	3.9 million

SOURCE: Michigan Department of Natural Resources, Fisheries Division.

(Mahoney, Jester, and Stynes, 1986). The results of this survey are summarized below. A total of 44,000 questionnaires were mailed to a random sample of resident and nonresident license holders in 1984. The questionnaires were mailed on five different dates during the year to avoid seasonal biases. Fifty-seven percent of the questionnaires were returned. Certified letters and telephone calls were used to identify and correct for non-response bias. The percentage of survey responses by county is shown in Table 15-3.

Angler Characteristics

Over half (52%) of Michigan resident licensed anglers owned a boat or canoe used for fishing (Table 15-6). A third of the boats were 12 feet or less in length. Two thirds were 15 feet or less. Only 9% were 20 feet or longer. A significant percentage of the fishing done in Michigan was done from private boats.

Table 15-6. Percentage of resident licensed anglers who own boats/canoes used for fishing.

Status	Percent
Non-owner	47.7
Owner	52.4
Size Distribution of Boats	
12 Feet or less	33.0
13-15	33.0
16-19	25.0
20 Feet or greater	9.0

The greatest percentage (44%) of anglers considered themselves to be somewhat experienced (Table 15-7). Nine percent considered themselves to be beginners. Only four percent rated themselves as experts. Nonresidents reported similar skill levels.

Table 15-7. Self-rated skill level of anglers.

Skill Level	RESIDENTS Percent	NONRESIDENTS Percent
Beginner	8.9	9.0
Somewhat experienced	44.3	41.7
Experienced	42.8	44.5
Expert	4.0	4.8
Total	100.0	100.0

The vast majority (88%) of licensed anglers were white. The remaining 11% consisted of 2.6% Blacks, .5% Hispanics, .2% Native Americans, .1% Orientals, and 8.9% mixed races (Table 15-8). Three-quarters of resident licensed anglers were married. Almost two thirds (64%) of the spouses of licensed resident anglers fished but are not now required to purchase a license. Nonresident license holders were younger, better educated, and had higher incomes than resident anglers. The mean age of nonresidents was 41 versus 43 for residents. A quarter (24.8%) of the nonresidents and 18.1% of resident anglers had a college degree or higher level of education. Fourteen percent of the nonresidents had family incomes of \$50,000 or more in contrast to 8% of the residents. Conversely, 14% of the residents had family incomes of less than \$10,00 compared to only 7% of the nonresidents.

Angler Behavior Patterns

Almost a quarter of Michigan resident anglers fished out of state each year (Table 15-9). Three-quarters of these fished in only one other state or country. Five percent fished in three or more other states/countries. Almost half (46%) of those who fished out of state fished in Canada, 22% in Florida, and 10% in Ohio, primarily in Lake Erie (Table 15-10). Walleye, bass, and pike were the species most often sought on out-of-state trips.

Yellow Perch (65.1%), bass (64.4%), and panfish (64.2%) were the species sought by the greatest percentage of resident anglers (Table 15-11). Walleye (47.2%) and pike (45.9%) were next, followed by Chinook salmon (30.4%). A greater percentage of nonresident anglers fished for Chinook and Coho salmon, especially in streams/rivers, which suggests that these species attract the greatest number of out-of-state anglers.

Table 15-8. Socioeconomic characteristics of resident and nonresident licensed anglers.

Characteristic	Percent of Residents	Percent of Nonresidents
EDUCATION		
Grade School	5.8	2.9
Some High School	12.3	7.3
High School Diploma	35.7	38.1
Some College	28.9	26.9
College Degree	11.5	17.6
Some Grad-Med-Law School	.8	1.3
Advanced Degree	5.0	5.9
Total	100.0	100.0
FAMILY INCOME		
Under \$10,000	14.0	7.4
\$10-\$14,999	11.9	9.5
\$15-\$19,999	11.9	13.0
\$20-\$24,999	13.7	10.7
\$25-\$29,999	12.1	11.3
\$30-\$34,999	10.3	9.3
\$35-\$39,999	8.0	11.5
\$40-\$44,999	6.3	6.6
\$45-\$49,999	4.0	6.3
\$50,000 +	7.8	14.4
Total	100.0	100.0
AGE		
17-19	3.6	4.0
20-24	8.5	8.4
25-29	12.1	12.3
30-34	14.6	14.7
35-39	11.0	15.7
40-44	8.3	7.3
45-49	8.0	8.2
50-54	7.1	3.3
55-59	7.4	10.0
60-64	7.0	6.3
65-69	7.6	5.2
70+	4.8	4.6
Total	100.0	100.0

Table 15-9. Percent of resident Michigan anglers who fished out-of-state, 1984.

	Percent of Resident Anglers	Percent of Those Who Fished Out-of-State
Did Not Fish out-of-state	75.9	
Fished out-of-state	24.1	
One state/country		73.0
Two states/countries		21.6
Three or more state/countries		5.4
Total	100.0	100.0

Table 15-10. Other states/countries where Michigan resident anglers fished.

State/Country	Percent of Anglers Who Fished Out-of-State
Florida	21.5
Ohio	9.8
Wisconsin	4.5
Kentucky	3.3
Indiana	3.0
Tennessee	2.9
Minnesota	2.7
Texas	2.2
Montana	1.9
Arkansas	1.8
Alaska	1.6
Colorado	1.5
Illinois	1.4
Alabama	1.4
California	1.4
Wyoming	1.4
N. Carolina	1.3
Missouri	1.0
Missouri	1.1
Canada	46.4
Mexico	1.0
Other	10.0

NOTE: Figures add to greater than 100% due to multiple responses. Respondents could list up to 3 out-of-state locations.

Table 15-11. Percent of resident and nonresident anglers who fished for various species.

Species	Residents	Nonresidents
Yellow Perch	65.1	41.4
Panfish	64.2	49.9
Bass	64.4	59.5
Walleye	47.2	44.1
Pike	45.9	37.0
Lake Trout	25.9	28.6
Steelhead	25.0	27.3
Rainbow Trout	21.4	22.1
Brown Trout	24.1	20.0
Brook Trout	19.9	12.5
Chinook Salmon	30.4	47.8
Coho Salmon	29.9	47.3
Catfish	22.8	25.2
Carp	17.6	7.9
Smelt	24.2	7.5

Over half of resident anglers fished for panfish (58%) and bass (54%) on inland lakes (Table 15-12). More residents fished for perch on the Great Lakes (34.7%) than they did for chinook salmon (24.3%).

Table 15-12. Locations where resident and nonresident anglers fished for various species.

Species	RESIDENTS			NONRESIDENTS		
	Inland Lakes	Great Lakes	Streams/ Rivers	Inland Lakes	Great Lakes	Streams/ Rivers
	--Percent--			--Percent--		
Yellow Perch	42.1	34.7	7.3	27.8	20.8	3.7
Panfish	58.0	7.2	8.7	43.1	3.4	9.4
Bass	54.2	10.4	13.6	45.9	9.0	19.5
Walleye	26.4	20.7	13.0	29.0	12.9	12.2
Pike	36.4	10.1	9.4	30.3	6.3	6.0
Lake Trout	5.3	20.4	3.8	5.3	21.3	6.7
Steelhead	2.0	15.4	14.7	2.5	17.4	16.1
Rainbow Trout	5.4	4.7	15.2	5.6	7.7	12.8
Brown Trout	3.4	9.8	15.5	2.0	7.3	11.9
Brook Trout	2.3	1.5	18.0	1.6	1.4	11.5
Chinook Salmon	1.4	24.3	10.9	3.9	29.4	23.1
Coho Salmon	1.5	23.6	10.1	5.2	28.7	21.1
Catfish	13.8	5.0	9.4	14.6	3.4	11.9
Carp	5.1	2.0	13.4	5.0	.4	5.3
Smelt	2.0	12.5	11.9	.3	3.8	3.0

More than half of resident anglers bait-fished for perch (56%) and panfish (52%) (Table 15-13). More anglers fly-fished for panfish (10%) than fly-fished for brook trout (7%). Trolling was the most frequently used method of fishing for Chinook and Coho salmon.

"Other anglers" was the most frequently cited source of information used by anglers in deciding where and when to fish (Table 15-15). Forty percent of resident anglers and over half (52%) of nonresidents frequently relied on other anglers for information. Almost a quarter (24%) of residents and a third (32%) of nonresidents frequently received information from bait and tackle stores.

Angler Preferences

Bass was the preferred catch species of 22% of resident anglers, followed by walleye (17%), perch (12%), and panfish (10%) (Table 15-16). Almost half (48%) of the out-of-state anglers preferred to catch either bass (23%) or chinook salmon (25%). The preferred eating species of resident anglers were walleye, yellow perch, and panfish.

Forty-six percent of resident anglers preferred to fish on inland lakes (Table 15-17). Only 18% preferred to fish on streams/rivers. Fishing from private boat was the preferred mode of fishing for 71% of residents. Bait fishing was preferred to other methods by 38% of licensed resident anglers.

Anglers were asked to rank the importance of various attributes in selecting a fishing site. The criteria anglers used in selecting fishing sites varied considerably. Contamination in fish was the most important selection criterion of resident anglers, followed by presence of their favorite species, water clarity, and catch rate of keepable fish (Table 15-18).

Table 15-13. Methods resident anglers used to catch various species.

Species	Cast	Spinning	Bait	Trolling	Fly
----- Percent of Resident Anglers -----					
Yellow Perch	11.5	14.8	55.9	5.2	1.5
Panfish	13.9	20.2	51.5	4.2	10.2
Bass	29.6	33.1	35.7	17.5	6.2
Walleye	12.0	14.8	25.3	29.9	.9
Pike	16.5	17.8	23.9	24.0	.9
Lake Trout	4.4	5.4	6.1	18.2	1.0
Steelhead	6.5	10.4	10.2	11.5	3.3
Rainbow Trout	4.9	8.7	11.2	5.3	6.7
Brown Trout	5.1	8.9	11.5	8.0	6.6
Brook Trout	3.9	6.7	11.9	1.5	7.3
Chinook Salmon	6.0	8.1	5.9	20.1	1.7
Coho Salmon	6.2	8.0	6.3	18.7	1.3
Catfish	4.0	3.5	18.2	----	---
Carp/Suckers	2.7	1.9	11.0	----	---
3.7% Snagged Chinook 3.3% Snagged Coho					
3.3% Dipped for Carp 4.3% Speared Carp					

Table 15-14. Modes resident anglers used to catch various species.

Species	Shore/Wading	Pier/ Dock	Private Boat	Charter Boat	Ice
-----Percent of Resident Anglers-----					
Yellow Perch	14.9	19.9	50.0	1.8	25.9
Panfish	22.4	14.9	50.6	---	21.1
Bass	22.6	11.5	52.7	.7	3.1
Walleye	8.4	5.2	40.2	1.5	6.8
Pike	9.8	4.6	37.0	.8	12.4
Lake Trout	4.3	4.9	19.7	2.2	1.5
Steelhead	13.3	6.2	12.8	1.6	.4
Rainbow Trout	15.2	2.6	8.2	.3	.9
Brown Trout	15.7	4.3	10.4	.5	.7
Brook Trout	17.5	.9	3.2	---	.3
Chinook Salmon	10.5	6.9	20.1	3.3	.2
Coho Salmon	9.5	6.7	19.6	3.1	.2
Catfish	11.9	6.0	12.4	---	.4
Carp/Suckers	13.9	2.9	3.8	---	.6
Smelt	19.6	2.7	.9	---	---

Table 15-15. Information sources used by anglers.

Source	RESIDENTS			NONRESIDENTS		
	Never	Some- times	Often	Never	Some- times	Often
	--Percent--			--Percent--		
Other Anglers	7.0	52.2	40.8	5.8	42.6	51.6
Michigan D.N.R.	33.5	52.7	13.8	27.7	51.6	20.7
Newspapers	38.2	49.1	12.7	32.9	52.5	14.6
Magazines	51.2	40.4	8.4	38.4	43.6	18.0
Bait/Tackle Shop	23.9	51.9	24.2	16.9	50.9	32.2
Radio or TV	54.5	38.4	7.1	48.2	45.0	6.8

Table 15-16. Preferred catch and eating species of resident and nonresident anglers.

Species	RESIDENTS		NONRESIDENTS	
	Catch	Eating	Catch	Eating
Bass	21.6%	7.2%	23.4%	8.7%
Walleye	16.9	24.0	17.7	27.2
Yellow Perch	11.9	24.6	3.2	12.5
Panfish	9.8	14.2	6.8	13.0
Chinook Salmon	8.8	2.9	25.3	11.7
Pike/Musky	7.0	2.7	2.6	.4
Brook Trout	4.3	4.1	1.4	2.1
Steelhead	4.1	1.2	5.8	1.8
Trout	2.7	3.7	3.0	3.2
Brown Trout	2.0	1.5	1.2	1.3
Rainbow Trout	1.7	1.6	1.1	3.2
Lake Trout	1.7	1.5	.4	2.1
Coho Salmon	1.6	1.5	3.4	5.1
Catfish	1.1	1.7	.7	.8
Smelt	.6	1.0	0.0	.7
Carp/Suckers	.1	0.0	0.0	0.0
Missing	4.1	6.6	4.0	6.2
Total	100.0%	100.0%	100.0%	100.0%

Table 15-17. Preferred mode and method of fishing by resident and nonresident anglers.

Mode/Method	Residents	Nonresidents
LOCATION		
Inland Lakes	46.2%	39.8%
Great Lakes	36.2	29.6
Streams/Rivers	17.6	30.6
MODE		
Private Boat	71.5%	69.4%
Shore or Wading	19.0	24.3
Ice Fishing	4.5	2.0
Pier or Dock	4.3	0.7
Charter Boat	0.7	3.6
METHOD		
Bait Fishing	37.6%	23.1%
Trotting	19.7	16.4
Spincasting	19.3	24.8
Casting	15.9	25.1
Fly Fishing	6.0	4.9
Spearing	0.6	0.2
Dipping	0.5	0.0
Snagging	0.4	5.5

Table 15-18. Importance resident anglers assigned various attributes when selecting a fishing site.

IMPORTANCE RANKINGS							Mean
Attributes	Not Important 0	Somewhat Important 1	Important 2	Very Important 3	Crucial 4		
-----percent-----							
Angler crowding	17.2	15.0	25.7	25.0	17.1	2.1	
Competition from other recreation	25.6	14.9	21.7	23.1	14.7	1.9	
Places to fish from shore	28.1	17.5	24.1	20.4	9.9	1.7	
Boat launching	19.7	14.4	26.0	26.3	13.6	2.0	
Marina facilities	43.3	19.1	19.9	13.3	4.4	1.2	
Parking	19.6	17.1	29.9	22.2	11.2	1.9	
Restaurants	66.6	18.5	9.2	4.4	1.3	.6	
Overnight accommo- dations	52.4	17.6	16.6	9.9	3.5	.9	
Natural beauty	12.8	16.3	29.8	25.0	16.1	2.2	
Solitude	13.9	17.4	29.4	25.2	14.1	2.1	
Water clarity	5.2	10.5	28.4	32.1	23.8	2.6	
Contaminants	4.0	4.5	13.5	25.7	52.3	3.2	
Catch rate of keepable fish	7.7	14.2	35.1	29.4	13.6	2.3	
Catch rate of all fish	9.9	17.4	35.8	25.8	11.1	2.1	
Favorite species	3.9	6.9	28.2	40.4	20.6	2.7	
Size of fish	5.4	14.3	40.1	30.2	10.0	2.3	
Diversity of fish species	11.2	19.8	40.2	22.8	6.0	1.9	
Nearness to home	17.7	20.9	31.0	22.3	8.1	1.8	
Information about fishing	19.3	21.5	31.1	20.3	7.8	1.8	
Nearness 2d home	54.6	15.0	16.9	10.5	3.0	.9	
Chance for trophy	31.8	21.8	22.0	16.0	8.4	1.5	

Table 15-19. Importance nonresident anglers assigned various attributes when selecting a fishing site.

Attributes	IMPORTANCE RANKINGS					Mean
	Not Important 0	Somewhat Important 1	Very Important 2	Important 3	Crucial 4	
	percent					
Angler crowding	16.0	10.4	25.7	28.3	19.6	2.3
Competition from other recreation	25.1	13.1	23.0	25.2	13.6	1.9
Places to fish from shore	27.7	22.4	19.9	19.2	10.8	1.6
Boat launching	19.5	15.4	20.2	29.0	15.9	2.1
Marina facilities	39.3	21.8	20.7	13.8	4.4	1.2
Parking	13.3	20.6	27.9	26.0	12.2	2.0
Restaurants	43.0	24.7	20.0	10.4	1.9	1.0
Overnight accommo- dations	27.9	17.3	22.0	23.9	8.9	1.7
Natural beauty	12.4	10.8	28.3	32.9	15.6	2.3
Solitude	11.2	22.7	31.3	20.9	13.9	2.3
Water clarity	4.4	15.6	30.6	26.7	22.7	2.5
Contaminants	5.0	5.1	9.1	27.9	52.9	3.2
Catch rate of keepable fish	7.3	17.5	27.9	34.5	12.8	2.3
Catch rate of all fish	9.5	17.7	35.6	29.3	7.9	2.1
Favorite species	2.0	10.7	23.4	43.8	20.1	2.7
Size of fish	3.8	18.7	39.7	30.6	7.2	2.1
Diversity of fish species	9.4	20.6	42.8	22.8	4.4	1.9
Nearness to home	23.7	26.8	32.1	12.4	5.0	1.5
Information about fishing	12.0	18.2	36.0	24.4	9.4	2.0
Nearness 2d home	51.9	11.2	23.4	10.9	2.6	1.0
Chance for trophy	29.3	15.9	25.8	19.5	9.5	1.6

Table 15-20. Importance resident anglers placed on various reasons for fishing.

Reason/Benefit	Not	Somewhat	Very	Crucial	Mean
	Important 0	Important 1	Important 2		
	percent				
Fish to eat	14.3	24.3	31.3	8.2	1.9
Relaxation	2.0	6.4	27.2	20.3	2.7
Companionship	19.5	19.3	30.6	6.1	1.8
Enjoy nature	2.2	7.7	27.5	21.2	2.7
Challenge/excitement	6.7	14.0	30.8	16.2	2.4
To be alone	39.6	22.2	19.3	6.1	1.2
To improve skill	31.7	24.0	25.1	4.8	1.4
To get away	12.3	12.8	26.4	16.4	2.3
Exercise	41.8	22.4	20.8	3.7	1.1
Family togetherness	25.5	16.9	27.1	8.6	1.7
Trophy fish	49.3	19.2	16.6	5.3	1.0
Sense of achievement	32.8	23.5	25.3	5.3	1.4

Angler Expenditures

The study also collected detailed information on anglers' last fishing trip in Michigan. The information included the species sought, trip destination, trip length, and expenditures made at home, during travel to and from the destination, and near where they fished. Table 15-21 shows average trip and local expenditures by species for both day trips and overnight trips. The expenditure figures include anglers that did not spend anything on their last fishing trip.

Table 15-21. Estimated per-day angler expenditures by species.

Species	Day Trip Expenditures		Overnight Trip Expenditures		Average Overnight Trip Length (Days)
	Total ¹	Local	Total	Local	
Yellow Perch	\$36.00	\$7.00	\$219.00	\$97.00	7.0
Bass	35.00	6.50	206.00	84.00	6.0
Panfish	25.50	4.00	198.00	93.00	6.0
Walleye	45.36	7.50	259.00	115.00	7.0
Chinook Salmon	50.50	12.00	258.00	130.00	5.0
Lake Trout	56.00	11.00	279.00	120.50	5.0
Steelhead	68.00	7.00	227.00	110.00	4.0
Brown Trout	50.00	5.50	195.00	98.00	4.0
Brook Trout	58.50	2.50	184.00	58.00	5.0
Rainbow Trout	45.00	3.20	220.50	92.00	5.0
Smelt	9.00	3.50	81.50	23.50	3.0

¹At home, travel to and from, and locally.

Expenditures per day on fishing trips lasting one day or less ranged from a high of \$68 for steelhead to a low of \$9 for smelt. Average local expenditures were highest for persons fishing for Chinook salmon (\$12/angler-day) and lowest for smelt trips (\$2.50/angler-day). Persons fishing for brook trout on the average spent less locally (\$2.50) on day trips than persons fishing for any other species.

Persons fishing for Lake Trout on overnight trips spent \$279 per trip on trips lasting an average of 5 days. They spent an average of \$120.50 per trip and \$24 per day locally. Persons fishing for Chinook salmon spent an average of \$130 per trip (\$26 per day) near where they fished. They spent another \$128 either at home in preparation for the trip or during travel to and from the fishing site.

Charter Fishing in Michigan

The introduction of salmon to the Great Lakes and the development of the Great Lakes open water fishery have resulted in the growth of numerous supporting businesses such as boat dealers, tackle shops, and charter boat services. The growth of the latter has been especially dramatic. The number of licensed charter boats has increased over 500% from 150 in 1978 to 920 in 1985.

A recent study of Michigan's charter boat industry obtained comprehensive information on the size and characteristics of this industry (Mahoney, Brunke, and Pistis, 1986). During the summer of 1985, 83 captains located throughout the state distributed 10 questionnaires to a random sample of their charter parties. Fifty-four percent (448) of the questionnaires actually distributed were returned. Information was also obtained from the participating captains to estimate the total number of charters and the amount invested in their equipment.

The average captain had been in business eight years. Approximately \$31 million was invested statewide in charter boats and equipment. The average current (disposal) value of charter boats was approximately \$28,000. Captains on the average had an additional \$5,900 invested in fishing rods, baits, downriggers, fish-finding equipment, and radar.

The majority of captains were part-time operators. The average captain conducted 45 half-day charter trips and 20 full-day trips in 1985. The average fee was \$200 for a half-day trip and \$300 for a full-day trip. The average charter fishing party consisted of four persons, which means that approximately 239,000 people charter-fished in 1985. Charter customers paid approximately \$13.8 million in charter fees. This figure does not include expenditures on travel, lodging, or meals.

Charter fishing appears to be a significant generator of tourism activity both for the state and coastal communities where charter boats are docked. Thirty percent (71,700) of the 235,000 persons that charter-fished in 1985 were nonresidents (Table 15-22). Eleven percent were from Ohio, 5% percent from Illinois, and 4% from Indiana. Sixty-five percent of the charter customers stated that charter fishing was the primary and only purpose for the trip on which they charter-fished; 18% stated that it was the primary but not sole purpose of the trip (Table 15-23). Eighty-six percent of the customers reserved a charter before leaving home.

Seventy-three percent of the charter customers charter-fished on trips that lasted more than one day (Table 15-24). The average trip involved two (2.2) overnight stays. Only 27% of the trips did not involve an overnight stay. The average travel party consisted of 4.6 persons (Table 15-25). Most of these persons charter-fished. The average charter party consisted of four persons (Table 15-26). Over half (57%) of the charter customers on overnight trips stayed in motels and 13% camped (Table 15-27).

Over a third (39%) of the charter customers had not charter-fished in Michigan prior to the trip on which they received a questionnaire (Table 15-28). Charter boat customers had relatively high income and education levels: forty-two percent had family incomes of \$50,000 or more compared to 9% of licensed anglers as a whole (Table 15-29), and 42% had college degrees (Table 15-30).

Table 15-22. Locations of permanent residences of Michigan charter boat customers.

Zip Code Zone	Percent of Customers
MICHIGAN	70.0
Royal Oak (480)	21.7
Detroit (481,482)	14.3
Flint (484,485)	7.9
Saginaw (486,487)	4.2
Lansing (488,489)	6.9
Kalamazoo (490,491)	4.6
Jackson (492)	1.5
Grand Rapids (493-495)	5.4
Traverse City (496)	2.2
Gaylord (497)	1.3
Upper Peninsula (498,499)	0.0
OHIO	11.0
Columbus (430-433)	2.4
Toledo (434-436)	4.2
Cleveland (440-441)	.8
Cincinnati (450-452)	1.4
Other	2.2
ILLINOIS	4.5
North Suburban (600-603)	1.5
South Suburban (604,605)	.7
Chicago (606)	1.0
Other	1.3
INDIANA	3.7
OTHER STATES	10.8

Table 15-23. Purpose of trips on which persons charter-fished.

Purpose	Percent
Charter fishing primary and only purpose	65.2
Charter fishing primary but not only purpose	18.2
Charter fishing not primary purpose but planned	14.2
Charter fishing not planned	2.4
Total	100.0

Table 15-24. Length of trips on which people charter-fished.

Number of Nights	Percent	Cumulative Percent
0	27.2	27.2
1	26.4	53.6
2	18.5	72.1
3	10.6	82.7
4	4.0	86.7
5	1.5	88.1
6	2.0	90.1
7	3.7	93.8
8	1.2	95.1
9	1.2	96.3
10 or more	3.7	100.0
Total	100.0	

Table 15-25. Number of persons in the travel party on trips on which persons charter-fished.

Number on trip	Percent
1	2.3
2	16.9
3	17.2
4	33.3
5	14.4
6	9.0
7	1.5
8+	5.4
Total	100.0

Mean = 4.6 persons

Table 15-26. Number of persons in the charter boat party.

Number	Percent
1	2.0
2	15.0
3	15.4
4	37.5
5	15.4
6+	14.7
Total	100.0

Mean = 4.0

Table 15-27. Type of lodging used by charter boat customers.

Lodging Type	Percent
Motel	56.5
Campground	13.0
Relatives/Friends	8.3
Second Home/Cottage	6.4
Other (Lodge, B&B, Condo)	15.8
Total	100.0

Table 15-28. Percent of first time charter boat customers.

	Percent
First time charter fishing in Michigan	38.5
First time with the captain	18.5
Fished previously with the captain	43.0
Total	100.0

Table 15-29. Family income of charter boat customers.

Income	Percent	Cumulative Percent
Less than \$10,000	1.9	1.9
\$10-\$14,999	1.7	3.6
\$15-\$19,999	3.4	7.0
\$20-\$24,999	6.7	13.7
\$25-\$29,999	8.0	21.7
\$30-\$34,999	11.1	32.8
\$35-\$39,999	8.7	41.5
\$40-\$44,999	7.2	48.7
\$45-\$49,999	7.0	55.7
\$50-\$54,999	9.1	64.8
\$55-\$59,999	4.3	69.1
\$60,000 or more	30.9	100.0
Total	100.0	

Table 15-30. Education levels of charter boat customers.

Level	Percent	Cumulative Percent
Grade School	1.0	1.0
Some High School	3.1	4.1
High School	25.6	29.7
Some College	28.4	58.1
College Degree	24.3	82.4
Some Graduate School	2.4	84.8
Advanced Degree	15.2	100.0
Total	100.0	

References

- Bryant, William C. 1984. "Status of the Walleye in Michigan Waters of Lake Erie and Connecting Waters, 1980-1983." Fisheries Research Report No. 1918. Lansing, MI: Michigan Dept. of Natural Resources, Fisheries Division.
- Carl, Leon M. 1977. "Attitudes and Behavior of Anglers Fishing for Salmon on Michigan Streams." Fisheries Research Report No. 1848. Lansing, MI: Michigan Dept. of Natural Resources, Fisheries Division.
- Clark, Richard D., Jr. 1982. "The Impact of Voluntary Catch and Release of Legal Sized Fish on Recreational Fisheries." Fisheries Research Report No. 1903. Lansing, MI: Michigan Dept. of Natural Resources, Fisheries Division.
- Clark, Richard D., Jr. and Bin Huang. 1983. "The Dynamics of Competition Between Sport and Commercial Fishing: Effects on Rehabilitation of Lake Trout in Lake Michigan." Fisheries Research Report No. 1909. Lansing, MI: Michigan Dept. of Natural Resources, Fisheries Division.
- Fenske, Janice Lee. 1983. "Attitudes and Attributes of Anglers Who Fish for Trout in Michigan." Fisheries Research Report No. 1916. Lansing, MI: Michigan Dept. of Natural Resources, Fisheries Division.
- Galbraith, Merle G. and James C. Schneider. 1984. "Fishing at Chesterfield Pier, Lake St. Clair, and an Evaluation of Tires and Soybean Meal as Fish Attractors." Fisheries Research Report No. 1925. Lansing, MI: Michigan Dept. of Natural Resources, Fisheries Division.
- Goudy, Greg W. 1981. "The Exploitation, Harvest, and Abundance of Largemouth Bass Populations in Three Southeastern Michigan Lakes." Fisheries Research Report No. 1896. Lansing, MI: Michigan Dept. of Natural Resources, Fisheries Division.
- Michigan Department of Commerce, Travel Bureau. 1979. "Fishing Promotion Manual." Lansing, MI: Michigan Travel Bureau.
- Mahoney, Edward M., Mary Brunke, and Charles Pistis. 1986. "1985 Michigan Charter Boat Study." Unpublished report, Dept of Park and Recreation Resources, Michigan State University. East Lansing.
- Mahoney, Edward M., Douglas B. Jester, Jr., and Daniel Stynes. 1986. "A Study of Michigan's Sport Fishing Market." Report to the Fisheries Division, Michigan Department of Natural Resources. Department of Park and Recreation Resources, Michigan State University. East Lansing.
- Mahoney, Edward M. and Hideo Kikuchi. 1985. "A Market Segmentation and Economic Analysis of Michigan's Sport Fishing Market." Symposium on Social Assessment of Fishing Resources, Kettunen Center, Michigan.
- Mahoney, Edward M., Douglas B. Jester, Jr., and Robert Slana. 1985. "An Economic Impact Assessment of Liberalized Salmon Fishing in Michigan." Report to the Fisheries Division, Michigan Department of Natural Resources. Department of Park and Recreation Resources, Michigan State University. East Lansing.

Patriarche, Mercer H. 1980. "Movement and Harvest of Coho Salmon in Lake Michigan, 1978-1979." Fisheries Research Report No. 1889. Lansing, MI: Michigan Dept. of Natural Resources, Fisheries Division.

CHAPTER 16

HUNTING IN MICHIGAN

Charles M. Nelson

Introduction

Hunting is a popular recreational activity in Michigan. From July 1, 1983 to June 30, 1984, 912,119 people purchased one or more Michigan hunting licenses at a total cost of over \$12 million. This number of licensed hunters is exceeded only by Pennsylvania and Texas. In terms of license revenue, Michigan ranks sixth in the nation (US Fish and Wildlife Service, 1985).

The Michigan Department of Natural Resources (DNR) estimated that in 1982 hunters spent over 17.5 million days hunting and expended over \$300 million on travel, food, lodging, and licenses (Tucker, 1984). During the 1982 firearm deer season, the number of Michigan deer hunters exceeded the number of soldiers in the standing US Army (Tucker, 1984).

To provide some insights into this popular activity, this chapter discusses the supply of hunting opportunities in Michigan and trends in hunting license sales, hunting activity, game harvests, and hunter expenditures.

Supply of Hunting Opportunities

Michigan's expansive public land base of almost 7.4 million acres (or 21% of the state), coupled with large tracts of privately owned forest, farmlands, and wetlands, provides a wide variety of wildlife habitat and hunting opportunities. Table 16-1 describes the ownership of lands that are open to public hunting.

Table 16-1. Acreage of lands open to public hunting in Michigan.

Land Owner	As of	Acres	Percent of Total
DNR			
State forests (a)	Jan. 1, 1986	3,834,382	40.3
State game and wild- life areas (b)	Jan. 1, 1983	267,812	2.8
State park and rec- reation areas (c)	Jan. 1, 1986	185,929	1.9
Public access program (d)	Fall, 1985	131,286	1.4
DNR TOTAL		4,419,409	46.4
Federal government (e)	N.A.	2,974,218	31.2
Commercial Forest Act (a)	Jan. 1, 1986	2,131,145	22.4
TOTAL PUBLIC HUNTING		9,524,772	100.0

SOURCES: (a) Personal communication, Gerald Thiede, Forest Management Division DNR; (b) Harmes, Rolland. 1983. "Lands Division." In 1981-82 Biennial Report Michigan Department of Natural Resources; (c) Personal communication, Neil LaCasse, Parks Division DNR; (d) Personal communication, Tom Nederveld, Wildlife Division DNR; (e) US Fish and Wildlife Service, 1985.

State forest lands, which comprise the largest portion of the public hunting lands, are managed under a multiple use concept. The state forest management plan stresses the importance of managing lands for both wildlife and wood products, stating that "the value of the combined output is almost always greater than if management were directed at just one use" (DNR, 1983:33). Further, the plan states that one of the major strategies to strengthen Michigan's economy through forest resource development is to intensify efforts to improve wildlife habitat to assure that wildlife recreation is provided on all forest lands.

State game and wildlife areas are tracts of land intensively managed for wildlife. Such management may include vegetational manipulation that increases cover or food for the desired wildlife species, changes in agricultural practices to those more favorable to wildlife, water level management to provide habitat for ducks and geese, and intensive scientific study to better understand important wildlife species. State wildlife areas are heavily used by hunters since the majority of them are located in populous Southern Lower Michigan, whereas state forests are located in the less populous northern 2/3 of the state.

State park and recreation areas also provide hunting opportunities. Almost 70,000 acres of park land is open to hunting in Southern Lower Michigan. Because of the broad range of clientele attracted to state parks and the heavy emphasis on the summertime visitor, wildlife habitat in the parks is not as intensively managed as in game areas.

The Public Access Program, initiated by the legislature in 1976 (Public Act 373 of 1976), procures public hunting easements from willing land owners in Lower Michigan, primarily Southern Lower Michigan. Easements are purchased by the DNR using funds obtained from a \$1.00 Public Access Hunting Stamp, required of any person hunting in Region III. While many had hoped the program would open more land to public hunting in southern Michigan, research suggests that the program has been only marginally successful at achieving this goal. However, one benefit of the program has been to provide information to hunters about landowners who will allow hunting. This informational link opens up many hunting opportunities to hunters who would otherwise be forced to go "door to door" or to hunt on heavily used state game and wildlife areas (Holecek, 1983).

Federal lands include National Forests and National Lakeshores. National Forests provide multiple use lands in both the Northern Lower Peninsula and the Upper Peninsula. These lands are managed on a multiple-use basis similar to state forest lands, where hunting and wildlife habitat are major concerns. The National Park Service provides public hunting over most of their land at Pictured Rocks and Sleeping Bear Dunes National Lakeshores. Whereas most national parks do not provide hunting, when these parks were established by Congress they were specifically mandated to provide hunting.

Commercial Forest Act lands (Public Act 94 of 1925) are private lands on which the state encourages forestry by reducing the landowner's property taxes. This loss in revenue to local units of government is partially offset by flat rate payments per acre by the state to local units. Further, the landowner, at the time of timber harvest, makes a payment to the local unit in lieu of property taxes. The payment is called a yield tax and is a proportion of the value of the timber harvested. In exchange for this tax reduction, all enrolled lands are open to public hunting and some other public recreational uses. The majority of such lands are in the Upper Peninsula and are owned by large forest products companies.

These lands, illustrated in Table 16-1 and described above, represent 26% of the land base of Michigan. In addition, many more acres of private lands provide hunting opportunities to land owners, their friends or relatives, or others who are given permission to hunt on them.

A study by the Wildlife Division (Urbain, 1982) suggests that in 1980 54% of all hunting in Michigan occurred on lands open to public hunting, while 46% occurred on private lands not open to public hunting (Table 16-2). In this study, commercial timber lands were considered private lands, even though they may be more correctly classified as public hunting lands.

Table 16-2. Hunting activity in Michigan during the 1980-81 hunting season by region and land ownership.

Land owner	Acres	Hunts	Hunts/ Acre	% of Hunts
Region I public	3,619,021	1,422,270	0.4	7.8
Region I private	6,966,075	692,920	0.1	3.8
Region I total	10,585,096	2,115,190	0.2	11.6
Region II public	2,865,904	4,927,148	1.7	26.9
Region II private	8,719,176	2,341,202	0.3	12.8
Region II total	11,585,080	7,268,350	0.6	39.7
Region III public	506,324	3,526,586	7.0	19.3
Region III private	9,728,133	5,378,844	0.6	29.4
Region III total	10,048,959	8,905,430	0.9	48.7
State public total	6,991,249	9,876,004	1.4	54.0
State private total	25,413,384	8,412,966	0.3	46.0
GRAND TOTAL	32,404,633	18,288,970	0.6	100.0

SOURCE: Adapted from Urbain, John. 1982. "Hunter Recreation Days by Zone." Michigan Dept. of Natural Resources, Wildlife Division. 1 pp. mimeo.

The importance of public hunting areas is visible in their heavy use. On a per acre basis, public areas were hunted by 4 1/2 times as many hunters as private areas. However, the private acreage represents the greatest opportunity for absorbing future demand for hunting in Michigan, especially in Southern Lower Michigan. Over 75% of the state's land base that can provide hunting is in the private sector. Innovative programs that encourage landowners to allow more hunting on their land could alleviate the intensity of hunting on public lands, especially those in Southern Lower Michigan where hunter densities are highest.

Hunting License Sales

The hunting of all game animals by all persons except landowners on their own property is licensed by the state of Michigan.

During 1980-1984, substantial decreases in license sales occurred in most major license segments (Table 16-3). Most visible is the decrease in resident hunt licenses,

the license that those over age 15 buy to hunt small game, upland birds, and waterfowl. This decrease was also apparent with younger hunters in reduced sales of the junior hunt license. This 5 year decrease in hunt license sales is part of a longer term decline in resident hunt license sales.

Table 16-3. Michigan hunting and trapping license sales, 1980-84.¹

License	1980	1981	1982	1983	1984	% change 1980-84
Resident hunt	378,982	365,951	335,895	302,073	301,522	-20.4%
Res. hunt jr.	57,505	56,090	51,154	46,932	44,766	-22.2
Non-res. hunt	5,571	5,839	5,795	5,220	5,537	- 0.6
Shoot preserve	331	399	455	486	581	+75.5
Res. deer(gun)	651,333	668,146	649,018	609,834	619,330	- 4.9
Non-res. deer	10,597	10,714	10,339	10,210	10,103	- 4.7
Res. archery	152,521	168,556	177,620	172,270	173,612	+13.8
Res. arch. jr.	16,365	19,465	20,583	20,293	19,931	+21.8
Non-res. arch.	4,039	4,401	4,903	4,133	4,469	+10.6
Camp deer per.	N.A.	771	914	881	1,184	N.A.
Trapping	15,208	15,129	12,780	9,628	10,291	-32.3
Res. bear	8,668	8,562	9,296	8,762	8,859	+ 2.2
Non-res. bear	592	652	698	832	847	+43.1
Senior hunt (all species and trapping)	56,199	62,302	63,769	61,459	61,269	+ 9.0
State water- fowl stamp	63,123	54,801	53,997	56,983	59,208	- 6.2
Federal water- fowl stamp ²	55,573	49,261	49,358	49,890	49,656	-10.6
Public access stamp	342,899	320,474	313,323	298,377	310,025	- 9.6
Put-take pheas- ant permit	19,983	19,134	16,509	10,157	N.A.	N.A.

¹As of June 30 each year.

²Personal communication, Gerald Martz.

SOURCE: Michigan Department of Natural Resources. 1985. "Comparative statement of license sales 1980-84." 1 pp. mimeo

In firearm resident deer licenses, only a minor percentage decrease occurred. However, this small percentage decrease consisted of over 30,000 licenses. In archery deer licenses, the only increase in a major license category occurred. This increase in archery hunting also translated to younger hunters in the junior archery license and to non-resident archers. For the state's other regularly hunted big game animal, the black bear, license sales were relatively static over the 5 year period.

Trapping license purchases dropped substantially over the 5 year period. Fluctuations in trapping license sales have been linked to fur prices, and as the 80s have progressed, fur prices have declined.

Waterfowl license sales moderately declined over the period. However, the previous 5 years (1975-79) showed a precipitous decline of almost 50%. Waterfowl license sales have been linked to waterfowl abundance and increased bag limits. In the early 80s, waterfowl were less abundant than they had been in the 70s, but waterfowl regulations were liberal and stable. A study of hunters who dropped out

of waterfowl hunting suggested that the cost of waterfowl licenses and permits and the required use of non-toxic shot may have been significant factors in the decline of waterfowl hunters between 1977 and 1980 (Nelson, et al., 1985).

Nonresident license sales have remained static over the 5 years despite recent efforts of the state to promote Michigan recreational activities to out-of-state visitors.

Hunting Activity and Harvest

Small Game

This section is organized by license category. The first set of tables deal with hunting activity for species generally classified as small game. Each table provides 7 statistics for the period 1979-83. Those listed as potential hunters had the legal right to hunt a given species because they possessed the basic license necessary to hunt. This basic license was one of the following: resident hunt (1979-83), resident junior hunt (1980-83), sportsman (1979-83), senior sportsman (1979), or senior hunt (1980-83). These tables also contain estimates of the actual number of people who legally hunted that species, the number of total hunts for that species (which may be less than or equal to one day), and the seasonal harvest of that species. These estimates were derived from annual surveys conducted by the Wildlife Division of the DNR. The information contained in the small game tables is adapted from Reis (1985).

Pheasants

For many years ring-necked pheasants were harvested in large numbers in Michigan. In the 1950s, harvests of over 1 million cocks (male pheasants) were common. However, declines in pheasant hunting and harvest began in the 1960s and continued during 1979-83 (Table 16-4).

Table 16-4. Statistics on pheasant hunting in Michigan, 1979-83.

	1979	1980	1981	1982	1983
Potential hunters	599,657	545,281	527,066	489,594	446,634
Actual hunters	261,110	230,440	202,190	168,810	135,150
% potentials hunting	44%	42%	38%	34%	30%
Total hunts	1,619,920	1,387,690	1,141,020	963,990	747,510
Hunts/hunter	6.2	6.0	5.6	5.7	5.5
Harvest	421,180	433,110	347,120	250,500	189,590
Harvest/hunt	.26	.31	.30	.26	.25

SOURCE: Reis, T. 1985. Michigan Department of Natural Resources, Wildlife Division Report No. 2997.

The proportion of potential hunters actually hunting pheasants dropped markedly over the period. A lesser drop is also evident in the annual hunting effort of the remaining pheasant hunters, even though season lengths have remained constant. Average success in harvesting pheasants remained relatively static. This may be a

somewhat deceptive statistic, however, as it is likely that the remaining pheasant hunters were the most dedicated and skilled pheasant hunters one would normally consider to be more successful at harvesting birds.

Ruffed Grouse

Conditions favoring ruffed grouse and ruffed grouse hunting in Michigan have been improving. Increased timber harvest, especially of aspen, has improved grouse habitat in the northern 2/3 of the state. In Southern Lower Michigan grouse habitat has also improved due to the reversion of many farmed lands to brush and woods. Unlike pheasants, which are birds of private southern Michigan agricultural lands, ruffed grouse are birds of the forest where over 40% of the land is in public ownership or where arrangements such as enrollment under the Commercial Forest Act guarantee public hunting opportunities.

There has been a slight decrease in the proportion of hunters hunting ruffed grouse over the 5 years (Table 16-5). This decrease has not been as dramatic as in the case of pheasant hunting. The number of average hunts per hunter stayed relatively static. Harvest of grouse, both on a total and a per hunter basis, dropped substantially over the period. This may be somewhat misleading, however. The general trend for ruffed grouse harvest between 1958 and 1984 was steadily upward. Meanwhile, the general trend for harvest per hunt was steadily downward (Michigan Department of Natural Resources, 1984). Taken in that longer time context, the number of grouse hunters has been increasing, as has the harvest, while the harvest per hunt has been decreasing.

Table 16-5. Statistics on ruffed grouse hunting in Michigan, 1979-83.

	1979	1980	1981	1982	1983
Potential hunters	599,657	545,281	527,066	489,594	446,634
Actual hunters	231,810	220,640	215,400	192,540	154,780
% potentials hunting	39%	40%	41%	39%	35%
Total hunts	1,769,710	1,723,710	1,741,470	1,549,290	1,209,130
Hunts/hunter	7.6	7.8	8.1	8.0	7.8
Harvest	723,910	756,660	723,620	522,140	363,040
Harvest/hunt	.41	.44	.42	.34	.30

SOURCE: Reis, Y. 1985. Michigan Department of Natural Resources, Wildlife Division Report No. 2997.

Woodcock

Woodcock are often hunted in conjunction with ruffed grouse since these species frequent similar habitat. Habitat conditions and hunting opportunities have also improved for woodcock in recent years. Woodcock hunter numbers decreased over the 5 years while their proportion of the small game hunters remained relatively static (Table 16-6). The harvest of woodcock decreased at a rate similar to the decrease in the number of hunters and hunts. The number of hunts per hunter and harvest per hunt remained static.

Table 16-6. Statistics on woodcock hunting in Michigan, 1979-83.

	1979	1980	1981	1982	1983
Potential hunters	599,657	545,281	527,066	489,594	446,634
Actual hunters	104,350	99,760	82,780	82,260	67,450
% potentials hunting	17%	18%	16%	17%	15%
Total hunts	748,870	720,160	634,250	607,700	493,610
Hunts/hunter	7.2	7.2	7.7	7.4	7.3
Harvest	321,830	299,590	251,440	258,750	208,260
Harvest/hunt	.43	.42	.40	.43	.42

SOURCE: Reis, T. 1985. Michigan Department of Natural Resources, Wildlife Division Report No. 2997.

Cottontail Rabbit

Cottontail rabbit hunting is the most popular type of small game hunting. The wide distribution of game, coupled with a hunting season that typically extends for over 5 months, provide hunting opportunities to a wide range of people. Cottontail hunting is often done in concert with pheasant hunting in Southern Lower Michigan since these species frequent the same areas.

The number of cottontail hunters and the proportion of small game hunters that hunted cottontails declined over the 5 year period (Table 16-7). However, it remains the most popular small game quarry. The number of hunts per hunter fluctuated over the 5 year period but no definite trend is apparent. Success on a per hunt basis for cottontails appears to be increasing. However, caution should be exercised since success figures appear to fluctuate substantially.

Table 16-7. Statistics on cottontail rabbit hunting in Michigan, 1979-83.

	1979	1980	1981	1982	1983
Potential hunters	599,657	545,281	527,066	489,594	446,634
Actual hunters	302,740	284,020	259,600	213,780	178,990
% potentials hunting	50%	52%	49%	44%	40%
Total hunts	2,655,950	2,742,990	2,373,890	2,034,190	1,565,550
Hunts/hunter	8.8	9.7	9.1	9.5	8.7
Harvest	1,181,180	1,454,630	1,369,070	852,980	831,600
Harvest/hunt	.44	.53	.58	.42	.53

SOURCE: Reis, T. 1985. Michigan Department of Natural Resources, Wildlife Division Report No. 2997.

Snowshoe Hare

Snowshoe hares are not as widely distributed as cottontail rabbits. While cottontails are found in forests and fields and seem to thrive near human habitation, snowshoes are generally animals of the forest in the northern 2/3 of Michigan. This

reduced distribution reduces the opportunity of many hunters to pursue snowshoes, even though they have a long open season like the cottontail.

Both the number of snowshoe hunters and their proportion of small game hunters decreased substantially during 1979-1983 (Table 16-8). Effort in the field for the remaining hunters remained fairly static while success per hunt decreased.

Table 16-8. Statistics on snowshoe hare hunting in Michigan, 1979-83.

	1979	1980	1981	1982	1983
Potential hunters	599,657	545,281	527,066	489,594	446,634
Actual hunters	121,580	100,410	88,120	79,210	59,860
% potentials hunting	20%	18%	17%	16%	13%
Total hunts	987,720	777,650	741,660	678,180	472,830
Hunts/hunter	8.1	7.7	8.4	8.6	7.9
Harvest	536,650	384,650	379,320	313,210	177,060
Harvest/hunt	.54	.49	.51	.46	.37

SOURCE: Reis, T. 1985. Michigan Department of Natural Resources, Wildlife Division Report No. 2997.

Squirrel

Squirrel hunting is a forest-oriented sport, focusing on oaks and other mast-bearing trees. In agricultural areas, popular squirrel hunting areas are also edges of corn fields adjacent to woodlots.

Both the number of squirrel hunters and the proportion of small game hunters who hunted squirrels decreased over the period (Table 16-9). The number of hunts per hunter and the harvest of squirrels per hunt have shown an upward trend. However, this has not offset the downward trend in the total number of hunts and the harvest of squirrels.

Table 16-9. Statistics on squirrel hunting in Michigan, 1979-83.

	1979	1980	1981	1982	1983
Potential hunters	599,657	545,281	527,066	489,594	446,634
Actual hunters	218,190	196,570	192,550	169,490	139,840
% potentials hunting	36%	36%	36%	35%	31%
Total hunts	1,447,140	1,383,100	1,372,080	1,211,880	1,020,230
Hunts/hunter	6.6	7.1	7.1	7.2	7.3
Harvest	834,250	897,580	1,004,590	783,710	664,050
Harvest/hunt	.58	.65	.73	.65	.65

SOURCE: Reis, T. 1985. Michigan Department of Natural Resources, Wildlife Division Report No. 2997.

Raccoon

Raccoon hunting differs from other types of small game hunting in two ways. First, it generally occurs at night rather than during the day. Second, the fur rather than the meat is generally most highly prized by hunters.

The number of raccoon hunters steadily decreased over the period, while the proportion of small game hunters hunting raccoon remained relatively static (Table 16-10). Both the number of hunts for raccoon and to a lesser extent the number of raccoon hunts per hunter also decreased. However, the general trend in harvest per hunter increased.

Table 16-10. Statistics on raccoon hunting in Michigan, 1979-83.

	1979	1980	1981	1982	1983
Potential hunters	599,657	545,281	527,066	489,594	446,634
Actual hunters	42,800	35,180	35,750	30,620	24,570
% potentials hunting	7%	6%	7%	6%	6%
Hunts	478,900	369,770	488,980	291,630	248,870
Hunts/hunter	11.2	10.5	13.7	9.5	10.1
Harvest	342,430	309,830	402,750	209,600	206,090
Harvest/hunt	.72	.84	.82	.72	.83

SOURCE: Reis, T. 1985. Michigan Department of Natural Resources, Wildlife Division Report No. 2997.

Waterfowl

To hunt ducks and geese in Michigan a hunter needs one of the basic licenses described above for small game. However, the hunter also needs a state waterfowl stamp if under age 65 and a federal waterfowl stamp if over age 15. Since the vast majority of people who purchase these extra stamps hunt waterfowl, the potential hunters described in Table 16-11 below still only reflect the purchase of the basic license described at the beginning of the small game section.

Waterfowl hunting also has some important differences in regulations compared to small game hunting. Waterfowl hunting regulations are set within a framework established by the federal government, whereas regulations for small game and big game are set solely by the individual states. The federal government's legal role in regulating waterfowl hunting and harvest is due to the international migratory bird treaties signed with Canada and Mexico concerning the management of migratory birds. Some waterfowl hunted in Michigan are born in Canada, migrate through Michigan and other states to the Gulf of Mexico, and fly across the Gulf to winter in Mexico. Waterfowl are also unique in that regulations are often oriented to individual species rather than to all ducks or geese. The bag limit for one type of duck in 1979, such as the blue winged teal, allowed a hunter to take 10 bluewings a day. During that same year a hunter could take only 1 canvasback per day, and once that canvasback was taken, no other ducks could be taken that day.

Ducks

Unlike the small game hunting effort described previously, where hunting seasons typically open and close on the same calendar date each year, the opening and closing days of duck hunting seasons changed every year during the period 1979-83, while season length remained constant.

Although the number of duck hunters decreased during the period, their proportion of basic license sales remained constant (Table 16-11). While total hunts also decreased, the average number of hunts per active hunter increased. Likewise, while total harvest was decreasing, harvest per hunter increased. A 1981 study of current and former waterfowl hunters found that dropouts were casual hunters who tended to be less successful and less active waterfowl hunters (Nelson et al., 1985). These results tend to support the hunting effort and success data displayed below.

Table 16-11. Statistics on duck hunting in Michigan, 1979-83.

	1979	1980	1981	1982	1983
Potential hunters ¹	599,657	545,281	527,066	489,594	446,634
Actual hunters	74,830	65,020	55,780	55,820	51,790
% potentials hunting	12%	12%	11%	11%	12%
Hunts	558,260	492,640	443,620	450,820	440,000
Hunts/hunter	7.5	7.6	8.0	8.1	8.5
Harvest	488,020	430,060	459,420	391,630	451,450
Harvest/hunt	.87	.87	1.03	.87	1.03

¹Includes all with a basic license. Those who actually hunt ducks also need a state waterfowl stamp if under age 65 and a federal stamp if over age 15.

SOURCE: Reis, T. 1985. Michigan Department of Natural Resources, Wildlife Division Report No. 2997.

Geese

Goose hunting opportunities changed between 1979 and 1983. In Southern Lower Michigan goose hunting opportunities significantly increased with the addition of a winter goose hunting season to harvest local Giant Canada geese. DNR waterfowl surveys suggest that over the past 25 years the population of these birds in the Southern Lower Peninsula increased approximately 500% from 7,500 to over 35,000 geese (Martz, 1986). Unlike most other waterfowl, many of these birds winter in Michigan, leaving only under the most severe conditions. During the summer, interactions between waterfront homeowners and the geese have resulted in hundreds of nuisance complaints annually to the DNR about goose droppings on beaches, decimated gardens, etc. The winter hunting season has been an attempt to reduce goose populations somewhat in this region and provide expanded recreational hunting opportunities.

While the number of goose hunters declined during 1979-83, the proportion of basic license holders hunting geese remained static (Table 16-12). The number of goose hunts also dropped during the period, while the number of hunts per active hunter rose slightly. Goose harvest started and ended the period at a similar level

with a mid-way decline. However, goose hunter success per hunt increased slightly. The long term trend in goose hunting and goose populations appears to be very positive. Over the past 25 years there has been a steady increase in goose populations and harvest.

Table 16-12. Statistics on goose hunting in Michigan, 1979-83.

	1979	1980	1981	1982	1983
Potential hunters ¹	599,657	545,281	527,066	489,594	446,634
Actual hunters	42,800	38,660	33,970	38,980	35,770
% potentials hunting	7%	7%	6%	8%	8%
Hunts	318,470	245,770	242,190	280,790	279,630
Hunts/hunter	7.4	6.4	7.1	7.2	7.8
Harvest	57,170	43,450	44,500	57,170	58,060
Harvest/hunt	.18	.18	.18	.20	.21

¹ Potential hunter category includes all with a basic license. Those who actually hunt geese also need a state waterfowl stamp if under age 65 and a federal waterfowl stamp if over age 15.

SOURCE: Reis, T. 1985. Michigan Department of Natural Resources, Wildlife Division Report No. 2997.

Turkey Hunting

Wild turkey hunting, like late season goose hunting in Southern Lower Michigan, represents a hunting opportunity only recently available. Wild turkey populations in Northern Lower Michigan and the Upper Peninsula started with the release of turkeys from other states. The first turkey hunting season in Michigan was held in 1965. Turkey seasons, unlike other hunting seasons, occur in the spring rather than the fall. Compared to other hunting activities, turkey hunting is a fairly heavily regulated activity. All hunting permits (licenses) are granted by the DNR using a lottery system. Hunters are also segmented by a hunting zone and hunting period during the turkey season. Since only one male turkey per hunter may be taken, Table 16-13 describes success in terms of a turkey harvested rather than on a harvest per hunt basis.

Table 16-13. Statistics on turkey hunting in Michigan, 1981-85.

	1981	1982	1983	1984	1985
Permits issued	16,404	17,588	18,337	18,126	15,010
Actual hunters	11,328	14,875	15,435	14,894	11,982
% permittees hunting	69%	85%	84%	82%	80%
Harvest	1,296	1,748	1,746	1,458	2,016
Total hunts	35,579	45,220	45,703	48,494	48,051
% hunters successful	11%	12%	11%	10%	17%

SOURCES: Urbain, J. 1985. 1984 Spring Turkey Season, Michigan Department of Natural Resources, Wildlife Division Rpt. No. 2993.; Reis, T. 1985. Hunting Results Michigan Spring Turkey Season, 1985. Michigan Department of Natural Resources, Wildlife Division Rpt. No. 3007; personal communication, John Urbain.

During the period 1981-85 a significant number of changes in turkey hunting opportunity took place which require caution in interpreting the table. Each year the area open to turkey hunting increased, with the largest increase occurring between 1981 and 1982. This expansion in huntable area was a major factor in the dramatic increase in harvest between those two years. The number of hunters has been a reflection of the number of permits available more than the interest in turkey hunting. Approximately 23,000 people annually apply for turkey permits, with 2/3 to 3/4 being successful applicants. Of licenses issued, the proportion actually hunting dramatically increased from 1981 to 1982 and then slightly declined. The large increase in the proportion hunting is probably attributable to the requirement that hunters pay license fees upon application for a permit in 1982, rather than upon receipt of a permit in 1981. The harvest of turkey increased significantly over the period, while hunter success remained relatively constant between 1981 and 1984 and increased sharply in 1985. Likewise, hunts per hunter remained static between 1981 and 1984 and increased sharply in 1985. The greater amount of time spent in the field is likely a reflection of the increased number of hunting days per period. This increase in hunting time per period restricted the number of total permits issued, but gave more hunting time to each permittee.

Big Game Hunting

Big game species in Michigan include whitetailed deer, black bear, and elk. While the basic seasons for deer (firearm and archery) did not fluctuate during 1976-82, the number of hunters' choice deer permits for firearm deer hunting changed annually. Potential hunters for firearm deer either have a senior resident (1976-79), senior hunt sportsman's, resident deer, or nonresident deer license. Potential hunters for archery deer either have senior archery (1976-79), resident archery, non-resident archery, sportsman's, or junior archery (1980-82) license.

Black bear hunting seasons have not differed significantly in recent years, although in 1981 and 1985 bear hunting was not allowed during the firearm deer season in the Upper Peninsula. Potential versus actual hunters were not calculated for bear hunters.

The first elk hunt in 20 years was held in 1984. For that hunt approximately 44,000 applications were received by the Wildlife Division for the 50 available hunting permits. Permittees were chosen at random and 49 of the 50 selected succeeded in bagging an elk. In 1985, 120 permits were issued by a random drawing from among over 50,000 applicants, and 119 elk were harvested (pers. comm. George Burgoyne). Elk hunting centers on the Pigeon River Country area bounded by the cities of Gaylord, Indian River, Onaway, and Atlanta.

Firearm Deer Hunting

Firearm deer hunting opportunities in Michigan have steadily improved since the mid-1960s. Estimated deer populations rose 100% between 1965 and 1985, from approximately 500,000 to over a million (pers. comm. Joseph Vogt).

Firearm deer license sales increased from 1976 to 1981 and in 1982 decreased slightly (Table 16-14). Hunts increased from 1976 to 1981 also, and remained essentially static in 1982. The number of hunts per hunter rose throughout the period. The harvest of bucks increased between 1976 and 1982 by 20%. Antlerless

deer harvest rose much faster (213%). The total harvest of deer legally taken by firearm hunters increased 50% between 1976 and 1982. Even though hunter numbers increased throughout the period, the success rate per hunter rose by almost 50%. The greatest increase in success was with hunter's choice permit holders, with the percentage of the total hunting population harvesting a buck showing a more modest increase over the period.

Table 16-14. Statistics on firearm deer hunting in Michigan, 1976-82.

	1976	1977	1978	1979	1980	1981	1982
Potential hunters	719,418	739,337	747,028	757,607	765,153	778,046	757,764
Actual hunters	682,960	693,880	704,040	711,340	727,210	734,040	711,120
% potentials hunting	95%	94%	94%	94%	95%	94%	94%
Actual hunters with hunter's choice permits	69,040	102,060	129,300	105,910	108,960	160,730	N.A.
Total hunts	4,511,300	4,658,280	4,812,320	4,980,940	5,286,900	5,259,540	N.A.
Hunts/hunter	6.6	6.7	6.8	7.0	7.3	7.2	N.A.
Buck harvest	90,220	106,780	106,990	91,440	108,250	123,690	108,060
Antlerless harvest	16,710	29,480	37,990	27,040	28,210	49,430	52,730
Overall hunter success	15.7%	19.6%	20.6%	16.7%	18.8%	23.6%	22.6%
Buck success	13.2%	15.4%	15.2%	12.9%	14.9%	16.8%	15.2%
Antlerless success	24.2%	28.9%	29.4%	25.5%	25.9%	30.8%	N.A.

SOURCES: Ryel, L.A. 1982. "The 1981 Deer Seasons". Michigan Department of Natural Resources, Wildlife Division Report No. 2927; personal communication, George Burgoyne, Wildlife Division.

Archery Deer Hunting

Archery deer hunting opportunities have increased in Michigan as the deer herd has increased. Further, a 1977 change in deer bag limits now allows a deer hunter to take one deer with a bow and one with a firearm, versus the previous limit of one with either a gun or a bow. Archery seasons, which occur in early fall (October 1-November 14) and early winter (December 1-January 1) provide a wider range of hunting dates than firearm deer seasons.

The number of archery hunters increased substantially between 1976 and 1982 (Table 16-15). The peak number of potential archers in 1979 was the last year of the sportsman's license, which offered a group of licenses, including a resident archery deer license, at considerably less than individual license cost. Since then, sportsman's licenses have been more of a convenience than a bargain. As the number of sportsman's license purchasers decreased, the proportion of license buyers eligible to archery hunt for deer and who did such hunting rapidly increased. Over the 7 year period, the number of archers increased 63%. During the same period, harvest burgeoned even more rapidly, increasing over 300%. The average level of hunting activity for individual archers steadily increased over the 7 years. The total success of archers in harvesting a deer doubled during the period, rising at a more rapid rate than the increase in hunting activity.

Table 16-15. Statistics on archery deer hunting in Michigan, 1976-82.

	1976	1977	1978	1979	1980	1981	1982
Potential hunters	231,558	285,066	318,891	337,086	276,148	291,608	299,856
Act. hunters	131,680	176,760	205,700	216,190	204,550	214,750	223,660
% potentials hunting	56.9%	62.0%	64.5%	64.1%	74.1%	73.6%	74.6%
Hunts	1,715,320	2,333,170	2,760,080	3,205,320	3,137,750	3,364,100	3,442,290
Hunts/hunter	13.0	13.2	13.4	14.8	15.3	15.7	15.4
Deer kill	10,220	21,190	25,140	25,640	28,110	33,320	38,400
Hunter success	7.8%	12.0%	12.2%	11.9%	13.7%	15.5%	17.2%

SOURCES: Ryel, L. 1982. "The 1981 Deer Seasons." Michigan Dept. of Natural Resources, Wildlife Division Rpt. No. 2927; personal communication, Tim Reis, Wildlife Division.

Bear

Bear hunting in Michigan is a specialized sport, attracting a small but dedicated group of hunters. There are two bear hunting opportunities in Michigan. The first is a series of three brief bear-only seasons in the Upper Peninsula and the Northern Lower Peninsula, prior to the November 15-30 firearm deer season. The second is a bear hunt during the firearm deer season in the Upper Peninsula only. During the first set of seasons, the use of dogs to hunt bear is permitted, whereas during the deer season dogs are not allowed. Table 16-16 shows bear harvest over the period 1979-83. The Wildlife Division studied bear hunting during only the 1982 and 1983 seasons.

Table 16-16. Statistics on bear hunting in Michigan, 1979-83.

	1979	1980	1981	1982	1983
Bear only seasons hunters	N.A.	N.A.	N.A.	9,815	10,193
Bear/deer hunters in UP	N.A.	N.A.	N.A.	1,741	1,651
Bear only hunts	N.A.	N.A.	N.A.	81,118	47,241
Bear/deer hunts	N.A.	N.A.	N.A.	16,082	12,333
Bear only hunts/hunter	N.A.	N.A.	N.A.	8.3	4.6
Bear/deer hunts/hunter	N.A.	N.A.	N.A.	9.2	7.5
Bear only harvest	754	857	939	1,494	1,355
Bear/deer harvest	154	62	---	12	36
Bear only success	N.A.	N.A.	N.A.	15.2%	13.3%
Bear/deer success	N.A.	N.A.	N.A.	0.7%	2.2%

NOTE: No bear hunting allowed during 1981 deer season.

SOURCE: Hill, W. 1985. "Michigan Bear Kill Estimates." Michigan Department of Natural Resources, Wildlife Division Report No. 3002.

As the table illustrates, only recently have bear hunters and bear hunting received the intensive survey research focused on most other types of hunting in Michigan. One other note is the importance of different methods in estimating bear harvest. Prior to 1982, all bear kills had to be registered with the DNR. Experience with this system suggests that the harvest based on registration is probably underreported (pers. comm. H. Hill). The survey research used more recently is viewed as being more liberal. Thus the apparent increase in bear harvest may not be as great as the table suggests.

Trapping

Trapping for fur-bearing animals is another form of wildlife recreation. Trapping opportunities in Michigan fluctuate with both the populations of furbearing animals and the season dates selected. No accurate studies have recently been conducted to estimate the populations of furbearing animals in the state. In recent years, season dates have allowed for slightly longer trapping seasons for commonly trapped water-related animals such as the muskrat, raccoon, mink, beaver, and otter. Restrictions have been placed on the trapping of red and gray fox by shifting their status from unprotected animals (which can be hunted or trapped year round) to game species with a limited hunting and trapping season. Besides opportunity for trapping, interest in trapping appears to be related to the raw fur prices trappers receive for their pelts. In years of higher prices, much more trapping takes place and somewhat more animals are caught. However, even in years of relatively lower prices, many people continue to trap. Unlike other types of hunting, only Michigan residents are permitted to trap in Michigan. Table 16-17 describes trapping activity in Michigan during the period 1981-82 through 1983-84.

Table 16-17. Size and value of furbearer harvest by Michigan trappers, 1981-83.

	Number of Animals Trapped			Est. Avg. Pelt Value(\$)			Est. Total Harvest Value(\$)		
	'81-82	'82-83	'83-84	'81-82	'82-83	'83-84	'81-82 ^a	'82-83 ^b	'83-84 ^b
Muskrat	756,820	551,047	487,270	4.87	2.65	3.38	3,685,713	1,460,275	1,646,973
Mink	40,770	24,121	23,295	19.91	14.53	18.06	811,731	350,478	420,708
Raccoon	69,910	72,853	61,927	21.67	15.66	13.54	1,514,950	1,140,878	838,491
Opossum	45,070	39,597	49,092	1.70	2.00	1.81	76,619	79,194	88,856
Skunk	36,740	24,332	22,691	2.34	2.20	3.00	85,972	53,530	68,073
Weasel	2,890	1,507	2,540	0.70	1.60	1.71	2,023	2,411	4,343
Red Fox	33,690	26,595	26,673	54.00	31.65	33.94	1,819,260	841,732	905,282
Gray Fox	3,550	1,197	1,754	23.00	26.78	29.85	81,650	32,056	52,357
Coyote	7,670	3,492	3,538	39.00	23.18	20.00	299,130	80,945	70,760
Bobcat	340	540	552	72.00	66.50	49.33	24,480	35,910	27,230
Beaver	14,150	18,887	26,952	14.72	12.70	14.02	208,288	239,864	377,867
Otter	550	1,421	563	32.00	26.96	29.82	17,600	38,310	16,789
TOTAL	1,012,150	765,589	706,847	---	---	---	8,627,416	4,355,583	4,517,729

^aMichigan Fur Auction records.

^bBased upon mail survey data.

SOURCE: Reis, T. and H. Hill. 1985. "Michigan Furbearer Catch by Trappers, 1983-84." Michigan Department of Natural Resources Wildlife Division Report No. 2995.

Muskrats are the most valuable animal taken by trappers in terms of total value, and are also the most commonly harvested. In terms of higher-value species, red fox and raccoon are the most commonly harvested.

Over the 3 seasons the number of furbearing animals harvested decreased. The price drop from the 1981-82 season to the 1982-83 season may be in large measure responsible for this decline in harvest since the number of licensed trappers between the 1981-82 season and the 1983-84 season fell by 39%. The average dollar amount trappers received for their pelts fell from \$622 in 1981-82 to \$376 in 1982-83 and rose to \$530 in 1983-84 (Reis and Hill, 1985).

Economic Valuation Measures of Hunting

Three valuation measures of hunting are presented below. The first is an expenditure measure based on the 1980 national survey of hunting and fishing conducted by the US Fish and Wildlife Service (1983). Using the estimated number of hunter-days generated by the DNR in their 1982 surveys of small game hunters (Reis, 1985), deer hunters (Ryel, 1982), bear hunters (Hill, 1985), turkey hunters (Urbain, 1985; Reis, 1985), and trappers (Reis and Hill, 1985), the number of hunter days was multiplied by the average expenditure per hunting day reported by the Fish and Wildlife Service for each type of hunt, using Michigan data from their national survey (Table 16-18).

Table 16-18. Estimated Michigan expenditures of hunters and trappers during 1982.

	Number of Participants	Recreation Days	Expenditures Per Recreation Day	Total Expenditures
Small Game Hunters ¹	364,851	7,485,300	\$ 11.00	\$ 82,338,300
Firearm Deer Hunters	713,850	5,327,220	25.00	133,180,510
Archery Deer Hunters	223,660	3,422,290	25.00	85,557,250
Waterfowl Hunters	53,364	759,330	15.00	11,389,950
Trappers	12,780	410,380	5.13	2,105,249
Turkey Hunters	16,532	45,910	25.00	1,147,750
Bear Hunters	9,594	97,200	25.00	2,430,000
Total	1,394,631	17,547,630		\$318,149,009

¹Does not include crow or woodchuck hunters.

SOURCE: Tucker, Dan. 1984. "1982 Michigan Hunting and Trapping Seasons." Michigan Department of Natural Resources.

Table 16-19 portrays the distribution of hunter expenditures among different sectors of the economy in the case of small game hunting, waterfowl hunting, and big game hunting (which includes firearm deer, archery deer, bear, and turkey hunting).

Table 16-19. Distribution of expenditures for hunting in Michigan in 1980.

Type of expenditure	TYPE OF HUNTING		
	Small game	Waterfowl	Big game
Food	27.2%	25.2%	34.0%
Lodging	2.2	1.1	3.8
Vehicle	29.5	32.3	22.8
Hunting equipment used mainly for target species	30.4	22.0	21.1
Auxiliary equipment used mainly in hunting target spec.	5.2	8.6	10.5
License	4.7	7.9	5.2
Other	0.8	2.9	2.6

SOURCE: Adapted from US Fish and Wildlife Service. 1983. 1980 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Michigan.

The relative importance of spending on food and vehicles, and the relative unimportance of spending on lodging suggests that many hunters camp or use their own or others' homes when hunting. However, the expenditures on food and vehicles suggest that travel and restaurant meals are common. Proportional license expenditures are the highest for waterfowlers, who in Southern Lower Michigan must generally buy four separate licenses to hunt, while small and big game hunters in the same region need purchase only two. Licenses still remain a minor cost compared to expenditures on equipment, food, and vehicles.

Table 16-20 shows estimates for the potential meat value of game harvested during the 1982 hunting/trapping season. The meat is valued as the equivalent of ground round steak at \$1.66 per pound unless otherwise noted. In terms of dollar value, venison provides almost 75% of the total meat value of the wildlife harvested each year. Rabbits, squirrels, and raccoons are the only other species that provide over a million dollars worth of meat.

Table 16-20. Potential meat value of 1982 hunter-trapper harvest in Michigan.

Species	Harvest	Ave. weight dressed meat	Total weight	Dollar value
Deer	202,560	60 lb.	12,153,600	\$20,174,976
Bear	1,520	100 lb.	152,000	253,320
Ruffed Grouse	522,140	1 lb.	522,140	866,752
Woodcock	258,750	1/4 lb.	64,687	107,381
Cottontail	852,980	1 1/3 lb.	1,134,463	1,883,209
Snowshoe Hare	313,210	1 1/3 lb.	416,569	691,505
Squirrel	783,710	1 lb.	783,710	1,300,959
Turkey	1,748	12 lb.	20,976	34,820
Raccoon	279,510	7 lbs. @ 60/lb.	1,956,570	1,173,942
Pheasant	250,500	2 lb.	501,000	831,660
Geese	57,170	4 lb.	228,680	379,609
Duck	391,630	1 lb.	391,630	650,106
Coot	12,320	1 lb.	12,320	20,451
Quail	CLOSED	1/3 lb.		---
Muskrat	551,047	1 lb. @ .50/lb.	551,047	275,523
Beaver	18,887	15 lb.	283,305	---
Bobcat	540	10 lb.	5,400	---
Opossum	39,597	3 lbs. @ .33/lb.	118,791	39,597
Totals	4,537,819		19,296,888	\$28,683,810

SOURCE: Tucker, D. 1984. "1982 Michigan Hunting and Trapping Seasons." Michigan Department of Natural Resources.

The only legal way for hunters or trappers to receive financial consideration for wildlife they have taken is through the sale of furs and hides. Table 16-21 shows the potential value of furs and hides sold during 1982. The dollar values per pelt are based on prices reported at fur sales in Michigan during fall 1982-spring 1983.

Table 16-21. Potential fur/hide value of 1982 hunter-trapper harvest in Michigan.

Species	Harvest	Ave. value ¹ per pelt	Dollar value
Deer	202,560	\$ 6.50	\$ 1,316,640
Bear	1,520	52.00	79,040
Muskrat	551,047	2.65	1,460,274
Mink	24,121	14.53	350,478
Raccoon	279,510	15.66	4,377,127
Fox	37,280	30.00	1,118,400
Skunk	24,332	2.20	53,530
Coyote	3,492	23.18	80,945
Bobcat	540	66.50	35,910
Beaver	18,887	12.70	239,865
Otter	1,421	26.96	38,310
Squirrel	783,710	.15	117,556
Weasel	1,507	1.60	2,411
Opossum	39,597	2.00	79,194
Snowshoe Hare	313,210	--	---
Cottontail	852,980	--	---
Totals	3,135,714		\$ 9,349,680

¹ From Michigan Fur Auction records.

SOURCE: Tucker, D. 1984. "1982 Michigan Hunting and Trapping Seasons." Michigan Department of Natural Resources.

The value of hides and pelts tends to fluctuate more radically than meat values from year to year. Prices for the most commonly trapped furbearer, the muskrat, were low in 1982. In 1981, for instance, the DNR estimated average muskrat pelt values at \$4.87, or almost twice that of 1982 (Reis and Hill, 1985). In 1982, the most valuable furbearer was the raccoon. Raccoon pelts accounted for over 40% of the total value of furs and hides.

Conclusion

The future for hunting in Michigan is both bright and cloudy. The state has abundant wildlife habitat. Wildlife professionals in state government have the legal mandate to protect and propagate game populations and provide for outdoor recreation activities such as hunting by authority of Public Act 17 of 1921. Many private organizations in Michigan provide monies above and beyond the license money generated by the DNR to construct cooperative projects on public land to improve wildlife habitat. Michigan also has laws that protect critical wildlife habitat on public and private lands, such as the Wetlands Act (PA 306 of 1979), the Inland Lakes and Streams Act (PA 346 of 1972), the Great Lakes Submerged Lands Act (PA 247 of 1955), and the Michigan Environmental Protection Act (PA 127 of 1970).

Hunting annually attracts nearly a million participants. Hunters are well-organized politically with numerous organizations to represent their interests. Their direct user-pay contributions to their programs through license and stamp sales and taxes on sporting arms and ammunition provide all the financial support given to the state of Michigan to operate wildlife programs and much of the wildlife law enforcement efforts.

Support for hunting is not universal, however. Unlike activities such as camping or boating, which have no active opposition, hunting faces an active, politically vocal group which demands its reduction or elimination. Almost annually bills are introduced into the Michigan legislature to ban many forms of trapping. Recently, efforts to establish a mourning dove hunting season in Michigan were defeated in a court battle over whether the Natural Resources Commission or the Legislature had the legal right to establish such a season.

Despite opposition to hunting by some segments of the population, with almost 3/4 of a million deer hunters in the woods and fields across Michigan on November 15 of any given year, it is apparent that hunting is an attractive activity for a large segment of Michigan residents and nonresident visitors. It appears that such a sizeable group is unlikely to give up a popular recreational activity any time soon.

References

- Baumgartner, David M. and Victor J. Rudolph. 1974. "Resource Use and Management by Large Private Hunting and Fishing Clubs in Northern Lower Michigan." Michigan State University Agricultural Experiment Station Research Report 260. East Lansing.
- Harmes, R. 1983. "Lands Division" In 1981-82 Biennial Report Michigan Department of Natural Resources. Lansing, MI: Michigan Dept. of Natural Resources.

- Hill, H. 1985. "1983 Michigan Bear Kill Estimates." Michigan Department of Natural Resources, Wildlife Division Report No. 3002.
- Holecek, D. 1983. "Michigan's Land Leasing Program for Public Hunting." Transactions North American Wildlife Conference. 48:108-115.
- Martz, G. 1986. "Preliminary Census Data Of Giant Canada Geese." Michigan Department of Natural Resources, Wildlife Division. Unpublished Data.
- Michigan Department of Natural Resources. 1984. "Ruffed Grouse Management Plan For Michigan." Wildlife Division.
- Michigan Department of Natural Resources. 1983. Michigan's Forest Resources: Direction for the Future. Lansing, MI: Michigan Department of Natural Resources.
- Nelson, C., D. Feltus, and G. Martz. 1985. "Opinions of Current and Former Waterfowl Hunters on Management and Regulations." Michigan Department of Natural Resources. Wildlife Division. Rpt. No. (to be assigned).
- Reis, T. and H. Hill. 1985. "Michigan Furbearer Catch by Trappers 1983-84." Michigan Department of Natural Resources, Wildlife Division Report No. 2995.
- Reis, T. 1985. "Hunting Results, Michigan Spring Turkey Season, 1985." Michigan Department of Natural Resources, Wildlife Division Report No. 3007.
- Reis, T. 1985. "Hunting Results, Michigan Small Game Seasons, 1983." Michigan Department of Natural Resources, Wildlife Division Report No. 2997.
- Ryel, L. 1982. "The 1981 Deer Seasons." Michigan Department of Natural Resources, Wildlife Division Report No. 2927.
- Tucker, D. 1984. "1982 Michigan Hunting and Trapping Seasons." Michigan Department of Natural Resources, Wildlife Division. 6 pp. mimeo.
- U.S. Fish and Wildlife Service. 1983. "A Summary of Selected Fish and Wildlife Characteristics of the 50 States." Washington, D.C.: U.S. Fish and Wildlife Service.
- U.S. Fish and Wildlife Service. 1982. 1980 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Michigan. Washington, D.C.: U.S. Fish and Wildlife Service.
- U.S. Fish and Wildlife Service. 1985. "Number of Paid License Holders, License Sales, and Cost to Hunters FY1984." Washington, D.C.: U.S. Fish and Wildlife Service. 1 pp. mimeo.
- Urbain, J. 1982. "Hunter Recreation Days by Zone." Michigan Department of Natural Resources, Wildlife Division. 1 pp. mimeo.
- Urbain, J. 1985. "1984 Spring Turkey Season." Michigan Department of Natural Resources, Wildlife Division Report No. 2993.

CHAPTER 17

WINTER SPORTS IN MICHIGAN

Daniel M. Spotts

Introduction

Winter sports are an important element of Michigan's travel and tourism system. As with hunting in the fall, participation in these sports generates travel activity that serves to ameliorate the seasonality of the travel and tourism industry. Unfortunately, there is relatively little accurate and current information on winter sports in Michigan. This chapter summarizes what information is available on three of Michigan's principal winter sports: snowmobiling, downhill skiing, and cross-country skiing.

Snowmobiling

The best available information on snowmobile registrations in the U.S. indicates that in 1984 Michigan had about 270,000 registered snowmobiles - more than any other state (Table 17-1). In 1981 over 6 million acres of public land in Michigan were open to snowmobiling. About 3,500 miles of snowmobile trail on public land were available in 104 different areas (Table 17-2). The Upper Peninsula contained 51% of the state's snowmobile trail mileage on public lands, and 53% of the state's public acreage open to snowmobiling (Table 17-2).

Downhill Skiing

According to Enzel (1985), Michigan has 45 downhill ski areas, more than any other state except New York or Wisconsin (Table 17-3). The average downhill ski area in Michigan has a vertical drop of 317 feet, 13 runs, a longest run of 2,886 feet, four tows, two or three chair lifts, and one T-bar, J-bar, or Poma lift (Table 17-4).

Cross-Country Skiing

In 1981 the state's public lands contained over 1,000 miles of cross-country ski trails in 198 different areas (Table 17-2). Sixty-six of the 83 counties in Michigan had one or more areas on public land which contained cross-country ski trails. In general, the heavily populated counties had the most public areas containing cross-country ski trails.

No in-depth research on cross-country skiing in Michigan has been conducted. However, a survey of registered snowmobile owners in Michigan was conducted in 1977 (Szcodronski, 1978), and a survey of downhill skiers in Michigan was conducted in 1978 (Stynes and Mahoney, 1980). The reports resulting from this research are listed below. Although the results contained in these reports are too dated to summarize here, they nevertheless represent useful baseline information on snowmobiling and downhill skiing in Michigan.

References

- Ballman, G.E.; T.B. Knopp; and L.C. Merriam. 1981. "Managing the Environment for Diverse Recreation: Cross-Country Skiing in Minnesota." University of Minnesota Agricultural Experiment Station Bulletin 544, Forestry Series 39. St. Paul.
- Chubb, Michael (ed.). 1971. Proceedings of the 1971 Snowmobile and Off the Road Vehicle Research Symposium. Technical Report No. 8, Recreation Research and Planning Unit, Dept. of Park and Recreation Resources, Michigan State University.
- Cooper, R.B.; P.S. Sadowske; and M.D. Kantor. 1979. Winter Recreation Visitor Study: Wisconsin. Summary Report. University of Wisconsin - Extension. Madison.
- Domoy, Francis M. 1975. "Ski-Area Managers: Do Your Objectives Reach Your Skiers?" Extension Bulletin E-912. Cooperative Extension Service, Michigan State University. East Lansing.
- Domoy, Francis M. 1977. "An Employment Analysis of the Michigan Ski Industry." Michigan State University Agricultural Experiment Station Research Report 329. East Lansing.
- Enzel, Robert G. 1985. The White Book of Ski Areas: United States and Canada. Washington, D.C.: Inter-Ski Services, Inc.
- Holecek, Donald F. (ed.). 1974. Proceedings of the 1973 Snowmobile and Off the Road Vehicle Research Symposium. Technical Report No. 9, Recreation Research and Planning Unit, Dept. of Park and Recreation Resources, Michigan State University.
- Leuschner, William A. 1970. "Skiing in the Great Lake States: The Industry and the Skier." U.S.D.A. Forest Service Research Paper NC-46. North Central Forest Experiment Station. St. Paul.
- Manning, R. and D.F. Holecek. 1975. "Private Land Leasing for Public Recreation --Snowmobiling in Michigan." Michigan State University Agricultural Experiment Station Research Report 282. East Lansing.
- Rasmussen, Gaylan A.; Robert Christie-Mill; Daniel J. Stynes; and Bill Deming. 1982. "Cross-Country Skiing: Characteristics and Trends, Trail Design, Marketing." Extension Bulletin E-1639, Cooperative Extension Service, Michigan State University.
- Spotts, Daniel M. 1980. "An Analysis of Former and Potential Skiers' Perceptions of Downhill Skiing." Technical paper for M.S. Degree, Dept. of Park and Recreation Resources, Michigan State University.
- Stynes, Daniel J.; Edward M. Mahoney; and Daniel M. Spotts. 1980. "Michigan Downhill Ski Marketing Study: A Comparison of Active, Inactive, Dropout and Potential Skier Market Segments." Michigan State University Agricultural Experiment Station Research Report 389. East Lansing.
- Stynes, Daniel J. and Edward M. Mahoney. 1980. "Michigan Downhill Ski Marketing Study: Segmenting Active Skiers." Michigan State University Agricultural Experiment Station Research Report 391. East Lansing.

- Stynes, Daniel J. and Daniel M. Spotts. 1980. "A Simulation Model for Forecasting Downhill Ski Participation." Proceedings 1980 National Outdoor Recreation Trends Symposium, Volume II. U.S.D.A. Forest Service General Technical Report NE-57, pp. 55-68.
- Stynes, Daniel J. 1980. "Interrelationships Among Three Outdoor Winter Sports." Proceedings North American Symposium on Dispersed Winter Recreation. Office of Special Programs, University of Minnesota. St. Paul. pp. 132-138.
- Stynes, Daniel J. and Kevin R. Szcodronski. 1980. "Predicting Trends in Michigan Snowmobile Populations Using Product Life Cycle and Diffusion of Innovations Theories." Proceedings North American Symposium on Dispersed Winter Recreation. Office of Special Programs, University of Minnesota. St. Paul. pp. 148-153.
- Szcodronski, Kevin Ralph. 1978. "Trends in the Characteristics of Michigan Snowmobile Owners." Unpublished Master's thesis, Dept. of Park and Recreation Resources, Michigan State University.
- Ted Farwell and Associates, Inc. 1977. "Skiing Demand and Supply Study for the Lower Peninsula of the State of Michigan." Report prepared for Huron-Manistee National Forest.
- Twardzik, Louis F. and Michael W. Skaggs. 1979. "Climatic Factors of Consider in Planning a Winter Recreation Enterprise in Michigan." Extension Bulletin E-715, Cooperative Extension Service, Michigan State University. East Lansing.

Table 17-1. Number of registered snowmobiles by state, 1984.

Rank	State	Number of registered snowmobiles in 1984	Percent	Cumula- tive Percent	Estimated number of unregistered snowmobiles
1	■ MICHIGAN	271,221	22.6	22.6	N.A.
2	Minnesota	202,944	16.9	39.5	N.A.
3	Wisconsin	164,124	13.7	53.2	N.A.
4	New York	67,346	5.6	58.8	25,000
5	Illinois	66,863	5.6	64.4	N.A.
6	Iowa	65,329	5.4	69.8	N.A.
7	Maine	47,862	4.0	73.8	N.A.
8	Pennsylvania	47,000	3.9	77.7	25,000
9	Indiana	32,651	2.7	80.4	15,000
10	Ohio	31,971	2.7	83.1	N.A.
11	New Hampshire	29,658	2.5	85.6	5,000
12	Vermont	21,288	1.8	87.3	N.A.
13	Idaho	20,200	1.7	89.0	10,000
14	Massachusetts	15,000	1.2	90.3	N.A.
15	Washington	14,959	1.2	91.5	N.A.
16	Colorado	13,788	1.1	92.7	6,000
17	Montana	13,261	1.1	93.8	30,900
18	Wyoming	12,197	1.0	94.8	N.A.
19	Utah	11,741	1.0	95.8	N.A.
20	North Dakota	10,976	0.9	96.7	N.A.
21	South Dakota	9,617	0.8	97.5	N.A.
22	Oregon	8,134	0.7	98.2	N.A.
23	California	4,816	0.4	98.6	3,900
24	New Mexico	4,500	0.4	98.9	N.A.
25	New Jersey	4,000	0.3	99.3	N.A.
26	Alaska	2,522	0.2	99.5	N.A.
27	Connecticut	2,379	0.2	99.7	N.A.
28	Nebraska	1,858	0.2	99.8	N.A.
29	Maryland	1,200	0.1	99.9	N.A.
30	Rhode Island	395	.0	100.0	N.A.
31	Delaware	266	.0	100.0	N.A.
	Total	1,200,066	100.0		

^a1983 figure.

NOTE: The remaining states in the U.S. do not register snowmobiles. Many of the above figures lack strict comparability across states because the lengths of registration periods vary and registration figures are current as of different dates.

SOURCE: Delaware figure from Delaware Department of Natural Resources and Environmental Control. All other figures from International Snowmobile Industry Association's "North American Snowmobile Registration Survey"; used with permission.

Table 17-2. Inventory of public lands providing snowmobiling and cross-country skiing opportunities, by Michigan county, 1981.

COUNTY	SNOWMOBILING				CROSS-COUNTRY SKIING	
	No. Areas With Trails	Total Miles of Trail	No. Areas Open to Snowmobiling	Total Acres Open to Snowmobiling	No. Areas With Trails	Total Miles of Trail
Alcona	3	17.5	6	115,368	3	29.5
Alger	5	126.5	6	161,964(5)	4	19.3
Allegan	1	12.0	1	829	3	24.5
Alpena	1	27.0	1	42,405	2	11.5(1)
Antrim	1	20.0	1	21,950	2	6.8
Arenac	0	0.0	1	27,939	0	0.0
Baraga	1	48.0	2	102,711	2	13.5
Barry	0	0.0	1	3,233	3	12.5
Bay	0	0.0	1	200	0	0.0
Benzie	1	65.9	1	58,658	2	45.9
Berrien	0	0.0	1	100	0	0.0
Branch	0	0.0	0	0	0	0.0
Calhoun	1	1.0	1	<1	3	6.0
Cass	0	0.0	0	0	3	4.5
Charlevoix	2	52.0	1	56,113	6	19.8(5)
Cheboygan	1	21.0	3	181,697	2	11.2
Chippewa	3	221.0	5	357,553	3	38.8
Clare	1	40.0	1	49,704	1	10.5
Clinton	0	0.0	1	2,568	2	5.0(1)
Crawford	1	108.1	3	199,256	2	10.8
Delta	6	52.0(4)	10	337,664	4	23.5(3)
Dickenson	1	153.0	3	3,525(2)	2	9.5
Eaton	0	0.0	0	0	3	7.1
Emmet	2	16.0	3	75,518	1	1.0
Genesee	1	1.0	2	23	4	11.8
Gladwin	1	47.5	3	86,099	0	0.0
Gogebic	1	85.0	2	269,605	2	47.0
Grand Traverse	1	58.0	1	65,305	5	35.1
Gratiot	0	0.0	0	0	0	0.0
Hillsdale	0	0.0	0	0	0	0.0
Houghton	4	148.0	7	172,862	4	15.5
Huron	0	0.0	3	1,436	2	3.5
Ingham	0	0.0	0	0	7	14.4
Ionia	1	2.0	2	3,302	0	0.0
Iosco	4	114.9	2	118,107	2	30.0
Iron	2	86.0	5	249,754	2	20.1
Isabella	0	0.0	1	1,787	5	7.7(4)
Jackson	1	1.0	4	1,298	3	17.3
Kalamazoo	2	4.3	3	1,525	3	7.5
Kalkaska	1	68.0	1	159,500	0	0.0
Kent	2	3.0	6	216	8	21.4
Keweenaw	1	84.0	1	3,550	2	10.0
Lake	3	161.3	2	169,964	1	8.7
Lapeer	0	0.0	2	4,597	1	6.0
Leelanau	2	4.4	3	9,367	2	3.8
Lenawee	0	0.0	5	3,172	1	1.5
Livingston	0	0.0	2	7,280	2	8.0
Luce	2	111.0	2	291,066	1	8.0
Mackinac	2	121.0	4	307,359	1	25.0
Macomb	0	0.0	3	1,642	7	17.0
Manistee	2	64.0	10	86,269(7)	1	1.5

Table 17-2. Inventory of public lands providing snowmobiling and cross-country skiing opportunities, by Michigan county, 1981 (continued).

COUNTY	SNOWMOBILING				CROSS-COUNTRY SKIING	
	No. Areas With Trails	Total Miles of Trail	No. Areas Open to Snowmobiling	Total Acres Open to Snowmobiling	No. Areas With Trails	Total Miles of Trail
Marquette	1	55.0	3	268,247	7	40.7
Mason	0	0.0	2	58,573	1	7.0
Mecosta	0	0.0	2	8,008	1	1.0
Menominee	2	16.0	4	92,067	3	12.0
Midland	2	12.0	2	40,311	2	13.2
Missaukee	1	24.0	2	93,004	1	1.0
Monroe	0	0.0	2	501	0	0.0
Montcalm	1	21.0	2	1,603	0	0.0
Montmorency	1	43.0	2	134,565	0	0.0
Muskegon	2	79.0	4	14,460	1	3.0
Newaygo	4	160.7(2)	5	108,462(3)	4	44.6(3)
Oakland	2	15.0	12	17,762	14	56.9
Oceana	1	25.0	3	51,717	2	5.0
Ogemaw	1	65.0	3	95,759	0	0.0
Ontonagon	6	410.0	2	270,978	4	43.0
Osceola	1	25.0	1	16,100	0	0.0
Oscoda	2	40.0(1)	3	195,842	1	N.A.
Otsego	1	17.0	1	52,000	1	17.2
Ottawa	1	1.0	3	49	1	0.5
Presque Isle	1	82.0	2	81,870	2	11.0
Roscommon	1	69.0	2	187,506	2	21.5
Saginaw	1	1.6	1	40	6	23.7
St. Clair	0	0.0	3	1,180	0	0.0
St. Joseph	0	0.0	0	0	1	2.0
Sanilac	0	0.0	2	350	0	0.0
Schoolcraft	2	74.0	5	371,869	3	11.9
Shiawassee	0	0.0	1	4	1	N.A.
Tuscola	1	0.5	1	1	2	3.5
Van Buren	0	0.0	1	286	0	0.0
Washtenaw	0	0.0	1	5,757	10	21.4
Wayne	1	10.0	1	500	6	23.7
Wexford	4	99.5	2	131,477	2	16.0
Total	104	3,490.7(99)	209	6,114,887(202)	198	1,011.8(190)

NOTE: "Public lands" means the sum of lands administered by the U.S. Forest Service, National Park Service, U.S. Fish and Wildlife Service, Michigan Department of Natural Resources, counties, townships, cities, and villages. Lands administered by school districts and private lands open to the public for snowmobiling and/or cross-country skiing are not included in the definition. Data are based on a 1981 mail survey of officials employed by the above government entities. Of the 1875 government entities contacted in the survey, 94.3% responded. The above figures do not include data on the remaining 5.7% of the government entities in the state. Data are also missing on the length of certain trails and/or the size of certain areas in some counties. In such cases, totals are reported for those trails or areas for which data exist, and the number of trails or areas upon which these totals are based is shown in parentheses. For example, in the case of Alger County, data exist on the size of 5 of the 6 areas open to snowmobiling, and the total acreage of these 5 areas is 161,964.

SOURCE: Michigan Recreation Facility Inventory conducted by the Recreation Services Division of the Michigan Department of Natural Resources.

Table 17-3. Number of downhill ski areas by state, 1985.

Rank	State	Number of Downhill Ski Areas	Percent	Cumulative Percent
1	New York	62	10.8	10.8
2	Wisconsin	46	8.0	18.9
3	■ MICHIGAN	45	7.9	26.7
4	California	37	6.5	33.2
4	Colorado	37	6.5	39.7
4	Pennsylvania	37	6.5	46.2
5	New Hampshire	29	5.1	51.2
6	Vermont	27	4.7	55.9
7	Massachusetts	21	3.7	59.6
7	Minnesota	21	3.7	63.3
8	Idaho	16	2.8	66.1
8	Montana	16	2.8	68.9
9	Oregon	14	2.4	71.3
9	Utah	14	2.4	73.8
9	Washington	14	2.4	76.2
10	Maine	12	2.1	78.3
10	Wyoming	12	2.1	80.4
11	Iowa	11	1.9	82.3
12	New Mexico	10	1.7	84.1
12	North Carolina	10	1.7	85.8
13	Illinois	9	1.6	87.4
13	Ohio	9	1.6	89.0
14	Indiana	8	1.4	90.4
14	New Jersey	8	1.4	91.8
15	West Virginia	7	1.2	93.0
16	Connecticut	6	1.0	94.1
17	Alaska	5	0.9	94.9
17	Virginia	5	0.9	95.8
18	Arizona	4	0.7	96.5
18	Nevada	4	0.7	97.2
18	North Dakota	4	0.7	97.9
19	South Dakota	3	0.5	98.4
20	Rhode Island	2	0.3	98.8
21	Alabama	1	0.2	99.0
21	Georgia	1	0.2	99.1
21	Kentucky	1	0.2	99.3
21	Maryland	1	0.2	99.5
21	Missouri	1	0.2	99.7
21	Nebraska	1	0.2	99.8
21	Tennessee	1	0.2	100.0
	Total	572	100.0	

NOTE: The remaining states in the U.S. (HI, KS, OK, TX, AR, LA, MS, SC, FL, and DE) have no downhill ski areas.

SOURCE: Enzel, Robert G. 1985. *The White Book of Ski Areas: United States and Canada*. Washington, D.C.: Inter-Ski Services, Inc.

Table 17-4. Selected characteristics of Michigan's downhill ski areas.

Name of Area	Vertical Drop (ft)	Number of Runs	Longest Run (ft)	Slope Difficulty (% of total)			Lift Capacity Per Hour	Number of Lifts ¹		
				Beginner	Intermediate	Advanced		Tows	Bars	Chairs
1. Al Quaal Recreation Area	100	3	600	50	50	0	350	3	0	0
2. Alpine Valley	250	23	1,800	30	40	30	10,800	14	0	9 dbls
3. Big Powderhorn Mountain	600	22	5,280	15	65	20	8,400	0	0	7 dbls
4. Big Valley	140	2	800	Yes	Yes	Yes	400	3	0	0
5. Bintz Apple Mtn. Resort	200	10	1,000	N.A.	N.A.	N.A.	6,000	10	0	0
6. Bittersweet Ski Area	300	6	2,300	Yes	Yes	Yes	N.A.	6	0	3 trpls
7. Blackjack	465	16	5,280	20	40	40	4,800	2	0	4 dbls
8. Boyne Highlands	515	17	5,200	30	35	35	15,000	1	1	4 trpls, 3 quads
9. Boyne Mountain	460	13	3,960	20	40	40	14,000	3	0	8 (3 quads)
10. Caberfae	470	37	4,700	30	40	30	N.A.	12	5-T	3 (1 trpl)
11. Cannonsburg Ski Area	250	32	1,800	25	60	15	15,000	12	2-T	3 (1 trpl, 1 quad)
12. Crystal Mountain	375	22	2,640	25	45	30	5,200	1	0	4 (1 quad)
13. Gladstone Sports Park	110	4	1,000	Yes	Yes	No	N.A.	4	1-T	0
14. Hanson Park	300	9	3,960	Yes	Yes	No	N.A.	4	1-T	0
15. Hilton Shanty Creek Ski Area	300	12	2,000	20	60	20	4,000	1	0	3 dbls
16. Indianhead Mountain	638	16	5,280	25	50	25	8,550	1	3	4 (1 trpl, 1 quad)
17. Marquette Mountain	600	13	6,600	25	50	25	3,500	2	1-T	1 dbls
18. Michawaye Slopes	215	9	1,200	N.A.	N.A.	N.A.	N.A.	2	2-P	1 dbl
19. Mio Mountain	250	13	1,500	N.A.	N.A.	N.A.	N.A.	5	0	0
20. Mont Ripley	420	5	2,200	N.A.	N.A.	N.A.	2,400	0	1-T	1 dbl
21. Mott Mountain	200	5	1,800	N.A.	N.A.	N.A.	3,600	4	0	1 dbl
22. Mt. Brighton Ski Area	250	25	1,500	30	40	30	16,000	10	0	7 (3 trpls)
23. Mt. Holly Ski Area	327	15	1,800	N.A.	N.A.	N.A.	8,500	4	0	7
24. Mt. Maria Ski Lodge	285	7	4,500	N.A.	N.A.	N.A.	4,800	3	0	1 dbl
25. Mt. Zion Ski Area	302	5	3,750	Yes	Yes	Yes	1,200	2	0	1 dbl
26. Mulligan's Hollow Ski Area	130	3	750	N.A.	N.A.	N.A.	750	2	1-T	0

27. Nub's Nob	425	20	3,960	30	40	30	8,200	1	1	5(3 dbls,tpl,& quad)
28. Pando	125	6	1,000	34	33	33	N.A.	6	0	0
29. Pine Knob Ski Resort	300	8	3,960	Yes	Yes	Yes	N.A.	7	0	5(3 trpls)
30. Pine Mountain	400	15	5,280	20	60	20	3,700	1	0	3 dbls
31. Porcupine Mtns. State Park	600	13	5,280	N.A.	N.A.	N.A.	3,500	2	3	1 dbl
32. Riverview Highlands Ski Area	160	8	1,500	Yes	Yes	No	5,600	1	3	2 quads
33. Royal Valley Ski Resort	220	15	1,800	20	45	35	8,400	6	1	3
34. Schuss Mountain	400	17	4,800	25	40	35	5,000	2	0	3(1 trpl)
35. Ski Brule Mtn./Ski Homestead	419	10	5,280	30	40	30	4,000	1	1-T	3 dbls
36. Sheridan Valley	290	5	480	Yes	Yes	No	N.A.	1	2-P	0
37. Skyline Ski Area	210	11	2,000	N.A.	N.A.	N.A.	9,500	8	1-T	1
38. Snovsnake Mountain	215	15	2,640	N.A.	N.A.	N.A.	3,600	5	0	1 trpl
39. Sugar Loaf Mountain Resort	440	24	5,300	20	45	35	6,000	0	1-J	5 dbls
40. Swiss Valley Ski Area	225	11	2,200	N.A.	N.A.	N.A.	7,500	4	0	3(2 quads, trpl)
41. Sylvan Knob	225	17	2,200	20	60	20	4,800	1	2	2(1 trpl)
42. Thunder Mountain	410	11	3,000	N.A.	N.A.	N.A.	2,500	2	0	2(1 quad)
43. Timber Ridge Ski Area	240	15	2,000	40	40	20	6,000	4	1	3(dbl,tpl,& quad)
44. Traverse City Holiday	260	12	1,500	Yes	Yes	No	N.A.	5	2	0
45. Tyrolean Ski Resort	270	17	2,500	N.A.	N.A.	N.A.	900	2	1-P	1 dbl
Average	317.5	13.2	2,886.2					3.8	0.8	2.6

¹T=T-bar; P=Poma; J=J-bar; dbl=double chair lift; trpl=triple chair lift.

SOURCES: Enzel, Robert G. 1985. The White Book of Ski Areas: U.S. and Canada. Washington, D.C.: Inter-Ski Services, Inc.

Michigan Travel Bureau. 1985. Michigan: Where Winter Comes to Life. Lansing, MI: Michigan Travel Bureau.

CHAPTER 18

GOLF FACILITIES IN MICHIGAN

Daniel M. Spotts

Golf facilities in Michigan are a component of the state's travel and tourism system since some tourists and businesspersons who travel in Michigan are golf enthusiasts. In 1984, there were 651 areas in Michigan which contained one or more golf courses. These areas contained 300 9-hole courses and 413 18-hole courses, or a total of 10,134 golf course holes (Table 18-1). Of these 10,134 holes, 91% were on regulation courses, 4% were on executive courses, and 5% were on par-3 courses. Over three-quarters (77%) of the 10,134 holes were on public courses and less than a quarter (23%) were on private courses. Between 1983 and 1984 the supply of golfing opportunities in Michigan increased 1.3% from 9,999 holes to 10,134 holes (Table 18-1).

Public golf courses in Michigan are concentrated in urban counties (Table 18-2). Oakland, Wayne, and Macomb counties lead the state in number of public golf course holes. With the exception of Menominee county, all of Michigan's counties have at least one public golf course.

In 1984 Michigan led the nation in the number of public golf course holes and ranked fifth in total number of golf course holes (Table 18-3). On a per capita basis, however, Michigan ranked fifth in number of public holes and eleventh in total number of holes.

References

- Jones, Rees L. and Guy L. Rando. 1974. Golf Course Developments. Technical Bulletin 70. Washington, D.C.: ULI-The Urban Land Institute.
- Moncrief, Lewis W. and John A. Scholtz. 1977. "Michigan's Profit-Oriented Golf Industry." Michigan State University Agricultural Experiment Station Research Report 326. East Lansing.
- National Golf Foundation. n.d. Statistical Profile of Golf in the United States: 1984 Annual Review. North Palm Beach, FL: National Golf Foundation.
- Rasmussen, Gaylan A. 1985. "Analyzing the Golf Course." Extension Bulletin E-1811. Cooperative Extension Service, Michigan State University. East Lansing.
- Rasmussen, Roy and Betty Rasmussen (eds.). 1985. 1986 Michigan Golfers Map and Guide. Detroit, MI: RSG Publishing, Inc.

Table 18-1. Number of golf courses and golf course facilities in Michigan, by type.

Type	AS OF DECEMBER 31, 1983				AS OF DECEMBER 31, 1984			
	Number of Courses			Number of Facilities ¹	Number of Courses			Number of Facilities ¹
	9-hole	18-hole	Total		9-hole	18-hole	Total	
REGULATION								
Private	30	110	140	137	32	108	140	137
Daily Fee	182	235	417	388	177	242	419	389
Municipal	30	40	70	64	31	42	73	66
Total	242	385	627	589	240	392	632	592
EXECUTIVE								
Private	6	0	6	4	6	0	6	4
Daily Fee	23	7	30	21	21	8	29	20
Municipal	2	2	4	3	3	2	5	4
Total	31	9	40	28	30	10	40	28
PAR-3								
Private	2	0	2	1	2	0	2	1
Daily Fee	25	9	34	27	25	9	34	27
Municipal	3	1	4	2	3	2	5	3
Total	30	10	40	30	30	11	41	31
GRAND TOTALS	303	404	707	647	300	413	713	651

¹The term facility denotes a single geographical area that contains one or more golf courses under one management. Where a facility includes courses of different sizes, the facility is counted in the row of its highest par course (e.g., a facility with a 9-hole regulation and an 18-hole executive course would be tallied in the appropriate regulation facility row).

SOURCE: National Golf Foundation. n.d. Statistical Profile of Golf in the United States, annual.

Table 18-2. Inventory of public golf facilities by Michigan county, 1985.

County	Rank	Total No. Public Holes ¹	No. Public 18-hole Courses	No. Public 9-hole Courses	No. Public Facilities ²
Oakland	1	630	22	26	40
Wayne	2	540	25	10	31
Macomb	3	468	20	12	24
Kent	4	459	23	5	23
Ingham	5	261	10	9	18
Jackson	6	252	9	10	18
Genesee	7	243	10	7	16
Monroe	7	243	11	5	13
Kalamazoo	8	225	10	5	13
Washtenaw	9	207	8	7	13
Berrien	10	180	8	4	12
Livingston	10	180	9	2	10
Allegan	11	171	8	3	11
Muskegon	12	162	6	6	10
Saginaw	12	162	6	6	10
Ottawa	13	153	7	3	9
Calhoun	14	144	7	2	9
St. Clair	15	117	4	5	9
Antrim	16	108	4	4	8
Charlevoix	16	108	4	4	6
Lenawee	16	108	4	4	8
Bay	17	99	5	1	6
Isabella	17	99	4	3	5
St. Joseph	18	90	5	0	4
Barry	19	81	3	3	6
Grand Traverse	19	81	3	3	5
Eaton	20	72	2	4	6
Otsego	20	72	4	0	4
Shiawassee	20	72	2	4	6
Clinton	21	63	2	3	5
Emmet	21	63	3	1	3
Ionia	21	63	3	1	4
Iosco	21	63	3	1	4
Lapeer	21	63	2	3	5
Roscommon	21	63	2	3	5
Tuscola	21	63	1	5	6
Van Buren	21	63	2	3	5
Benzie	22	54	2	2	4
Cass	22	54	1	4	5
Huron	22	54	2	2	4
Manistee	22	54	2	2	4
Midland	22	54	2	2	2
Montcalm	22	54	0	6	5
Sanilac	22	54	1	4	5
Wexford	22	54	2	2	3
Delta	23	45	2	1	3
Dickinson	23	45	2	1	3
Gratiot	23	45	1	3	4
Montmorency	23	45	2	1	2
Newaygo	23	45	2	1	3
Cheboygan	24	36	1	2	3
Gladwin	24	36	2	0	2
Hillsdale	24	36	0	4	4
Houghton	24	36	1	2	3

Table 18-2. Inventory of public golf facilities by Michigan county, 1985 (continued).

County	Rank	Total No. Public Holes ¹	No. Public 18-hole Courses	No. Public 9-hole Courses	No. Public Facilities ²
Mackinac	24	36	0	4	4
Marquette	24	36	2	0	2
Mason	24	36	2	0	2
Mecosta	24	36	2	0	2
Oceana	24	36	2	0	2
Arenac	25	27	1	1	2
Branch	25	27	0	3	3
Chippewa	25	27	0	3	3
Iron	25	27	1	1	2
Leelanau	25	27	1	1	2
Ogemaw	25	27	1	1	2
Alcona	26	18	0	2	2
Gogebic	26	18	0	2	2
Missaukee	26	18	1	0	1
Ontonagon	26	18	0	2	2
Alger	27	9	0	1	1
Alpena	27	9	0	1	1
Baraga	27	9	0	1	1
Clare	27	9	0	1	1
Crawford	27	9	0	1	1
Kalkaska	27	9	0	1	1
Keweenaw	27	9	0	1	1
Lake	27	9	0	1	1
Luce	27	9	0	1	1
Osceola	27	9	0	1	1
Oscoda	27	9	0	1	1
Presque Isle	27	9	0	1	1
Schoolcraft	27	9	0	1	1
Menominee	28	0	0	0	0
Total		7,623	299	249	495

¹Equals (number of 18-hole courses x 18)+(number of 9-hole courses x 9).

²The term facility denotes a single geographical area that contains one or more golf courses under one management.

SOURCE: Derived from information presented in Rasmussen, Roy and Betty Rasmussen (eds.). 1985. 1986 Michigan Golfers Map & Guide. Detroit, MI: RSG Publishing, Inc. Used with permission.

Table 18-3. Number of golf courses by state, 1984.

Rank	State	No. 18-Hole Courses Open to Public	No. Public 18-Hole Courses Per 100,000 Residents	Total No. 18-Hole Courses	Total No. 18-Hole Courses Per 100,000 Residents
1	MICHIGAN	435.0	4.79	563.0	6.20
2	California	422.0	1.65	684.0	2.67
3	Ohio	412.0	3.83	582.0	5.41
4	Florida	408.5	3.72	713.5	6.50
5	New York	386.0	2.18	622.0	3.51
6	Pennsylvania	323.0	2.71	534.5	4.49
7	Illinois	286.5	2.49	453.5	3.94
8	Wisconsin	220.5	4.63	288.0	6.04
9	Texas	219.0	1.37	495.5	3.10
10	Indiana	203.5	3.70	295.5	5.37
11	North Carolina	199.5	3.24	376.5	6.11
12	Minnesota	186.0	4.47	256.5	6.16
13	Massachusetts	162.0	2.79	260.5	4.49
14	New Jersey	123.5	1.64	231.5	3.08
15	Washington	117.5	2.70	169.5	3.90
16	South Carolina	112.5	3.41	217.5	6.59
17	Iowa	108.5	3.73	215.5	7.41
18	Arizona	100.0	3.28	156.0	5.11
19	Missouri	92.5	1.85	181.0	3.61
20	Virginia	90.5	1.61	204.0	3.62
21	Tennessee	88.5	1.88	172.5	3.66
22	Colorado	85.0	2.67	136.0	4.28
23	Georgia	84.0	1.44	220.5	3.78
24	Oregon	78.5	2.94	107.5	4.02
25	Connecticut	74.0	2.35	146.5	4.64
26	Oklahoma	71.0	2.15	118.0	3.58
27	Kansas	70.5	2.89	151.0	6.19
28	Kentucky	70.0	1.88	147.0	3.95
29	Maine	61.5	5.32	72.0	6.23
30	Alabama	59.0	1.48	158.0	3.96
31	Nebraska	57.5	3.58	107.0	6.66
32	West Virginia	53.5	2.74	87.0	4.46
33	New Hampshire	52.5	5.37	64.5	6.60
34	Hawaii	44.0	4.23	57.5	5.53
35	Maryland	43.5	1.00	132.5	3.05
36	Utah	43.0	2.60	61.5	3.72
37	Idaho	41.0	4.10	56.0	5.59
38	North Dakota	39.0	5.69	59.5	8.67
39	Louisiana	36.5	0.82	106.0	2.38
40	New Mexico	34.5	2.42	57.5	4.04
41	Arkansas	34.0	1.45	101.5	4.32
42	Vermont	32.0	6.04	41.5	7.83
43	South Dakota	31.0	4.39	57.5	8.14
44	Montana	30.0	3.64	47.0	5.70
45	Nevada	29.0	3.18	33.5	3.68
46	Mississippi	27.5	1.06	99.5	3.83
47	Rhode Island	23.5	2.44	42.0	4.37
48	Wyoming	22.0	4.31	33.5	6.56
49	Delaware	6.5	1.06	21.5	3.51
50	Alaska	4.5	0.90	6.0	1.20
51	District of Columbia	3.0	0.48	4.0	0.64
	U.S.	6,038.5	2.56	10,205.5	4.32

NOTE: Number of 18-hole golf courses is defined as the number of holes in a given state divided by 18.

SOURCES: National Golf Foundation. 1984. Statistical Profile of Golf in the United States: 1984 Annual Review. North Palm Beach, FL: National Golf Foundation.

U.S. Bureau of the Census. 1985. "State Population Estimates, by Age and Components of Change: 1980 to 1984." Current Population Reports, Population Estimates and Projections, Series P-25, No. 970, Table 1.

CHAPTER 19

EMPLOYMENT IN TOURISM-RELATED BUSINESSES IN MICHIGAN

Daniel M. Spotts

One of the most cogent indicators of the economic significance of tourism in a given area is the number of jobs supported by tourism-related businesses in that area. In recognition of this, the Research and Statistics Division of the Michigan Employment Security Commission published a study of "tourist-related employment" several years ago (Michigan Employment Security Commission, 1980). This study presented monthly employment figures for tourism-related businesses at a state, regional, and county level for each of the years 1974-1979. In response to a special request, MESC has generously provided the Travel Bureau and MSU with updated figures for 1980-1984. This chapter presents a series of tables which combine the figures from the original report with the updated figures for 1980-1984. The information contained in all of these tables was derived from the quarterly unemployment tax records of Michigan employers subject to the Michigan Employment Security Act (MESC form 1020).

Both the original report and the updated figures define a "tourist-related business" as a business in one of the following nine SIC categories:

1. Services Related to Water Transportation (SIC 446).
2. Gasoline Service Stations (SIC 554).
3. Boat Dealers (SIC 555).
4. Recreational and Utility Trailer Dealers (SIC 556).
5. Eating and Drinking Places (SIC 581).
6. Hotels, Motels, and Tourist Courts (SIC 701).
7. Rooming and Boarding Houses (SIC 702).
8. Camps and Trailer Parks (SIC 703).
9. Amusement and Recreation Services (SIC 799).

Some of the businesses in these categories of course serve local populations as well as tourists.

Tables 19-1 through 19-9 show the statewide average number of jobs in each of the above industries by month for each year 1974-1984, except Table 19-7 contains figures for only 1980-1984 because the earlier figures for SIC 702 were not published in the MESC report. Table 19-10 reports monthly and annual averages for the sum of jobs in the nine industries. Figure 19-1 portrays the raw data contained in Table 19-10 and a seasonally-adjusted trend line of these data. The annual averages reported in each of the tables in this chapter are equal to the sum of monthly figures for a given year divided by 12.

Of the nine industries, the eating and drinking places industry (SIC 581) supported by far the largest numbers of jobs. The annual average number of jobs in this industry peaked in 1979, then declined through 1982, and then increased through 1984. These fluctuations seem to reflect the recent recession and recovery. Since the annual average number of jobs in SIC 581 constituted over 70% of the total tourism-related employment in the state in each of the years 1974-1984, total tourism-related employment during this period reflected these same trends. The same trends are also apparent in the hotel, motel, and tourist court industry (SIC 701). The remaining industries seem to display trends of their own. In particular, employment in the recreational and utility trailer dealer industry

(SIC 556) seems to have been affected by public concerns about energy supplies during 1979-1980. Recreation vehicle shipments to Michigan and surrounding states seem to have been similarly affected by the energy situation at that time (Table 13-8).

Table 19-11 displays the annual average number of jobs in tourism-related businesses in each of Michigan's counties during 1974-1984. Tourism-related employment again means the sum of jobs in the nine industries listed above. Table 19-12 shows the monthly average number of jobs in tourism-related businesses in each of Michigan's counties during 1984. The 1984 data in both tables are preliminary figures that may differ slightly from final 1984 figures that will hopefully appear in future editions of this book.

References

- Domoy, Francis M. 1977. "An Employment Analysis of the Michigan Ski Industry." Michigan State University Agricultural Experiment Station Research Report 329. East Lansing.
- Domoy, Francis M. and Richard P. Barton. 1979. "An Employment Analysis of Michigan's Recreation Product Manufacturers." Michigan State University Agricultural Experiment Station Research Report 367. East Lansing.
- Frechtling, Douglas C. 1977. "Travel as an Employer in the State Economy." Journal of Travel Research. 15(4): 8-12.
- Michigan Employment Security Commission. 1980. Michigan Tourist-Related Employment Study. Detroit, MI: Michigan Employment Security Commission, Research and Statistics Division.
- Mueller, Raymond W. 1977. "When Is a Job a Job?" Journal of Travel Research. 9(1): 7-8.
- O'Donnell, Edward T. 1970. "How to Measure the Employment That Results From Tourism." Journal of Travel Research. 9(1): 7-8.
- Stynes, Barbara White. 1980. "Seasonal Employment Patterns in Northern Michigan." Unpublished Master's thesis, Department of Geography, Michigan State University.
- Stynes, Barbara White and Bruce William Pigozzi. 1983. "A Tool for Investigating Tourism-Related Seasonal Employment." Journal of Travel Research. 21(3): 19-24.

Table 19-1. Average number of jobs in Michigan's water transportation services industry (SIC 446) by month, 1974-1984.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
1974	750	784	837	1,023	1,542	1,469	1,478	1,369	1,250	1,161	1,107	914	1,140
1975	785	763	800	1,032	1,220	1,230	1,345	1,328	1,319	1,190	1,281	1,193	1,124
1976	804	820	851	1,013	1,318	1,416	1,305	1,450	1,417	1,158	1,223	1,005	1,148
1977	795	853	868	906	1,253	1,299	1,332	1,239	1,242	1,338	1,243	1,042	1,118
1978	761	697	792	976	1,356	1,304	1,344	1,316	1,435	1,391	1,248	1,039	1,138
1979	757	783	853	983	1,224	1,408	1,294	1,310	1,266	1,187	1,232	1,064	1,113
1980	620	666	659	758	969	994	1,009	979	988	793	904	687	836
1981	516	505	525	761	873	899	974	1,029	950	882	835	724	789
1982	529	554	555	735	950	1,053	1,074	916	914	938	789	747	813
1983	555	544	581	847	1,050	1,075	1,171	1,133	1,077	1,066	1,027	829	913
1984	686	710	682	879	1,233	1,262	1,389	1,364	1,352	1,081	1,084	1,024	1,062

SOURCE: Michigan Employment Security Commission.

Table 19-2. Average number of jobs in Michigan's gasoline service station industry (SIC 554) by month, 1974-1984.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
1974	24,342	23,087	22,463	22,810	24,049	24,946	25,296	25,779	25,920	26,128	26,168	25,949	24,745
1975	25,612	24,605	24,641	25,445	25,886	26,042	26,305	26,583	26,291	25,847	25,547	25,565	25,697
1976	25,394	25,209	25,062	25,572	25,805	26,195	25,524	25,230	24,812	24,295	24,332	24,579	25,167
1977	24,762	24,790	24,656	24,350	24,456	24,709	24,530	24,329	24,303	23,951	23,892	24,293	24,418
1978	23,169	23,305	23,399	23,748	23,920	24,231	23,511	23,471	23,724	23,407	23,646	23,764	23,608
1979	23,420	23,436	23,372	21,813	21,849	21,384	20,166	20,336	20,567	20,853	20,898	20,948	21,587
1980	21,501	21,416	21,256	20,674	20,815	20,677	20,705	20,791	20,699	20,739	20,735	20,747	20,896
1981	20,613	20,281	20,152	19,436	19,678	19,653	19,621	19,590	19,626	19,569	20,567	20,565	19,946
1982	20,770	20,693	20,684	20,306	20,423	20,553	20,563	20,563	20,364	20,244	20,095	20,083	20,445
1983	19,975	19,886	19,828	19,801	20,126	20,151	20,166	20,409	20,459	19,920	20,080	20,110	20,076
1984	20,521	20,421	20,516	20,851	21,258	21,601	21,462	21,827	21,730	21,623	21,540	21,619	21,247

SOURCE: Michigan Employment Security Commission.

Table 19-3. Average number of jobs in Michigan's boat dealer industry (SIC 555) by month, 1974-1984.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
1974	1,317	1,358	1,404	1,690	1,881	1,984	1,852	1,792	1,614	1,508	1,386	1,228	1,584
1975	1,133	1,135	1,210	1,339	1,537	1,657	1,654	1,626	1,514	1,356	1,273	1,173	1,384
1976	1,144	1,151	1,226	1,391	1,550	1,654	1,629	1,573	1,449	1,263	1,189	1,084	1,359
1977	1,059	1,107	1,182	1,477	1,657	1,742	1,714	1,657	1,521	1,356	1,208	1,134	1,401
1978	1,007	1,067	1,167	1,377	1,616	1,735	1,744	1,674	1,526	1,362	1,284	1,180	1,394
1979	1,106	1,170	1,289	1,573	1,802	1,868	1,744	1,674	1,507	1,373	1,252	1,127	1,457
1980	967	994	1,068	1,205	1,399	1,445	1,358	1,335	1,226	1,155	1,046	943	1,178
1981	826	851	945	1,180	1,344	1,413	1,385	1,357	1,230	1,096	997	874	1,125
1982	805	787	840	1,038	1,244	1,356	1,376	1,326	1,194	1,099	983	876	1,077
1983	751	778	887	1,188	1,336	1,408	1,414	1,381	1,300	1,200	1,102	992	1,145
1984	883	943	1,049	1,309	1,485	1,641	1,633	1,567	1,401	1,295	1,217	1,139	1,297

SOURCE: Michigan Employment Security Commission.

Table 19-4. Average number of jobs in Michigan's recreational and utility trailer dealer industry (SIC 556) by month, 1974-1984.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
1974	751	736	761	865	914	918	857	866	841	773	748	707	811
1975	662	640	678	707	776	789	816	806	762	728	715	699	732
1976	646	635	686	699	740	781	754	749	736	731	691	667	710
1977	647	682	752	774	818	861	821	817	808	754	711	686	761
1978	640	670	695	745	817	864	941	913	866	863	847	811	806
1979	597	620	668	671	692	699	636	604	566	569	536	505	614
1980	451	453	456	382	379	375	394	404	410	398	383	358	404
1981	311	317	335	371	378	391	429	405	390	356	348	318	362
1982	302	307	330	390	386	402	433	432	410	399	359	353	375
1983	309	309	356	408	425	446	460	458	459	432	425	386	406
1984	422	441	495	557	558	594	611	618	592	572	537	519	543

SOURCE: Michigan Employment Security Commission.

Table 19-5. Average number of jobs in Michigan's eating and drinking places industry (SIC 581) by month, 1974-1984.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
1974	133,289	132,712	136,259	141,488	147,551	151,075	150,450	151,831	153,023	148,442	146,606	144,443	144,764
1975	137,185	136,942	139,048	144,809	150,680	153,647	153,456	155,084	155,422	151,581	150,347	150,972	148,264
1976	144,443	144,629	149,388	157,539	164,510	167,788	164,805	166,335	168,157	166,360	161,192	162,616	159,814
1977	155,846	155,312	161,031	174,217	175,996	179,898	181,386	181,438	183,268	178,916	178,463	177,537	173,609
1978	169,391	170,083	176,712	182,017	190,272	192,532	192,115	194,549	194,474	190,581	189,507	189,031	185,938
1979	174,164	175,706	180,305	189,510	196,973	200,022	195,499	195,572	196,460	195,065	192,491	191,430	190,266
1980	179,894	180,248	182,497	186,625	193,347	195,383	191,507	192,934	192,099	188,184	185,973	185,144	187,820
1981	175,772	174,684	177,775	182,907	188,672	191,792	188,796	190,892	190,172	185,008	181,846	181,615	184,161
1982	171,948	170,084	173,550	178,159	186,617	189,522	186,130	187,288	185,992	182,589	180,586	179,587	181,004
1983	175,772	175,224	178,322	186,626	192,865	197,635	194,219	196,210	197,458	193,174	191,071	189,994	189,048
1984	181,734	181,493	184,392	193,506	199,867	204,096	203,705	204,983	204,398	199,578	197,254	197,860	196,072

SOURCE: Michigan Employment Security Commission.

Table 19-6. Average number of jobs in Michigan's hotel, motel, and tourist court industry (SIC 701) by month, 1974-1984.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
1974	17,719	17,924	18,227	18,198	20,080	21,349	21,388	21,674	20,700	20,041	19,023	18,966	19,607
1975	18,432	18,280	18,377	18,229	19,754	20,898	21,418	21,862	20,612	20,231	19,079	19,424	19,716
1976	20,363	20,785	20,476	20,705	21,920	22,983	23,597	23,549	22,643	21,519	20,696	21,254	21,708
1977	21,190	21,299	22,606	22,122	24,058	25,568	26,386	26,535	25,540	23,892	22,723	23,328	23,771
1978	21,998	22,263	22,672	23,284	25,016	26,354	27,734	27,638	26,491	25,348	24,014	24,724	24,795
1979	23,962	24,226	24,474	23,194	24,955	26,659	26,829	26,644	25,386	24,612	23,492	23,462	24,825
1980	21,951	22,116	22,344	21,306	23,130	24,233	25,254	25,061	24,168	22,656	21,448	21,545	22,934
1981	21,113	21,347	20,884	19,971	22,190	23,530	24,224	24,135	23,995	22,750	21,683	21,940	22,314
1982	21,379	21,089	21,001	19,974	21,989	23,166	24,505	24,570	23,539	22,140	20,601	20,778	22,061
1983	20,293	20,228	19,644	20,188	22,388	23,858	24,846	25,082	24,348	23,008	21,384	22,088	22,280
1984	22,534	22,687	22,465	21,479	23,392	24,725	25,596	25,618	24,828	22,773	21,084	21,473	23,221

SOURCE: Michigan Employment Security Commission.

Table 19-7. Average number of jobs in Michigan's rooming and boarding house industry (SIC 702) by month, 1980-1984.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
1980	166	136	129	131	163	181	198	192	178	170	133	131	159
1981	133	128	127	117	174	173	174	175	167	140	106	107	143
1982	105	103	103	105	146	141	157	156	151	151	106	106	128
1983	113	114	111	126	168	174	185	179	170	145	121	119	144
1984	82	80	78	86	101	111	173	170	154	146	97	93	114

SOURCE: Michigan Employment Security Commission.

Table 19-8. Average number of jobs in Michigan's camps and trailer parks industry (SIC 703) by month, 1974-1984.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
1974	948	971	836	784	905	1,036	1,832	1,958	1,074	775	719	653	1,041
1975	582	615	614	716	983	1,257	1,883	2,039	1,052	843	790	737	1,009
1976	758	787	694	769	988	1,255	1,897	2,049	1,062	911	840	799	1,067
1977	724	741	699	746	944	1,337	2,170	2,345	1,432	945	835	851	1,147
1978	784	825	802	792	1,006	1,356	2,300	2,445	1,266	892	819	882	1,180
1979	692	661	652	686	892	1,251	2,032	2,233	1,125	712	596	613	1,012
1980	601	601	588	744	961	1,374	1,968	2,229	1,076	897	787	787	1,051
1981	646	630	545	637	878	1,161	1,999	2,072	1,104	791	699	704	989
1982	560	562	557	565	807	1,234	2,577	2,429	1,087	814	659	655	1,042
1983	530	524	530	535	771	1,398	2,164	2,077	1,235	781	655	627	986
1984	584	627	599	641	832	1,424	2,136	2,246	1,344	835	743	746	1,063

SOURCE: Michigan Employment Security Commission.

Table 19-9. Average number of jobs in Michigan's amusement and recreation services industry (SIC 799) by month, 1974-1984.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
1974	6,752	6,845	6,791	8,760	11,045	12,834	13,179	13,105	12,032	10,195	8,539	8,763	9,903
1975	7,933	7,989	8,288	10,125	13,112	14,660	13,828	13,715	12,557	10,877	9,124	9,129	10,945
1976	8,460	8,481	8,341	10,797	12,790	14,614	15,252	15,146	14,184	11,937	9,648	10,416	11,672
1977	9,324	9,227	9,605	10,944	13,142	14,580	16,366	16,381	15,548	12,559	10,919	11,166	12,480
1978	10,694	10,736	11,266	11,808	14,259	16,024	16,189	16,260	15,020	12,538	10,870	11,282	13,079
1979	9,705	9,947	10,180	12,275	15,148	16,753	16,861	16,864	15,744	13,187	11,441	11,858	13,330
1980	10,746	11,001	11,506	12,255	15,376	16,696	17,578	17,445	16,018	13,457	11,593	12,162	13,819
1981	11,572	11,493	11,072	13,218	15,699	17,846	18,229	18,569	17,231	14,156	12,383	12,766	14,520
1982	11,296	11,161	11,294	12,992	16,715	18,941	18,719	18,946	17,436	14,247	12,032	11,874	14,638
1983	10,970	10,757	10,977	12,596	15,840	17,925	18,886	19,088	17,665	13,985	12,038	12,375	14,425
1984	10,300	9,863	10,250	12,248	15,259	17,604	18,322	18,450	16,952	13,843	12,214	12,404	13,976

SOURCE: Michigan Employment Security Commission.

Table 19-10. Average number of jobs in tourism-related industries in Michigan by month, 1974-1984.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
1974	186,227	184,749	187,867	195,911	208,303	215,991	216,725	218,801	216,835	209,382	204,584	201,929	203,942
1975	192,652	191,301	193,971	202,690	214,287	220,555	221,137	223,474	219,915	213,013	208,461	209,215	209,223
1976	202,237	202,721	206,950	218,684	229,838	236,908	234,998	236,308	234,675	228,364	219,989	222,598	222,856
1977	214,530	214,186	221,571	235,736	242,516	250,192	254,910	254,939	253,847	243,909	240,171	240,208	238,893
1978	228,651	229,857	237,723	244,962	258,515	264,659	266,111	268,506	265,018	256,571	252,403	252,877	252,154
1979	234,565	236,712	241,964	250,878	263,746	270,274	265,266	265,449	262,819	257,724	252,074	251,139	254,384
1980	236,897	237,631	240,503	244,080	256,539	261,358	259,971	261,370	256,862	248,449	243,002	242,504	249,097
1981	231,502	230,236	232,360	238,598	249,886	256,858	255,831	258,224	254,865	244,748	239,464	239,613	244,349
1982	227,694	225,340	228,914	234,264	249,277	256,368	255,534	256,626	251,087	242,621	236,210	235,056	241,583
1983	229,268	228,364	231,236	242,315	254,969	264,070	263,511	266,017	264,171	253,711	247,903	247,520	249,421
1984	237,746	237,265	240,526	251,556	263,985	273,058	275,027	276,843	272,751	261,746	255,770	256,877	258,596

NOTE: "Tourism-related industries" means SIC 446, SIC 554, SIC 555, SIC 556, SIC 581, SIC 701, SIC 702, SIC 703, and SIC 799.

SOURCE: Michigan Employment Security Commission.

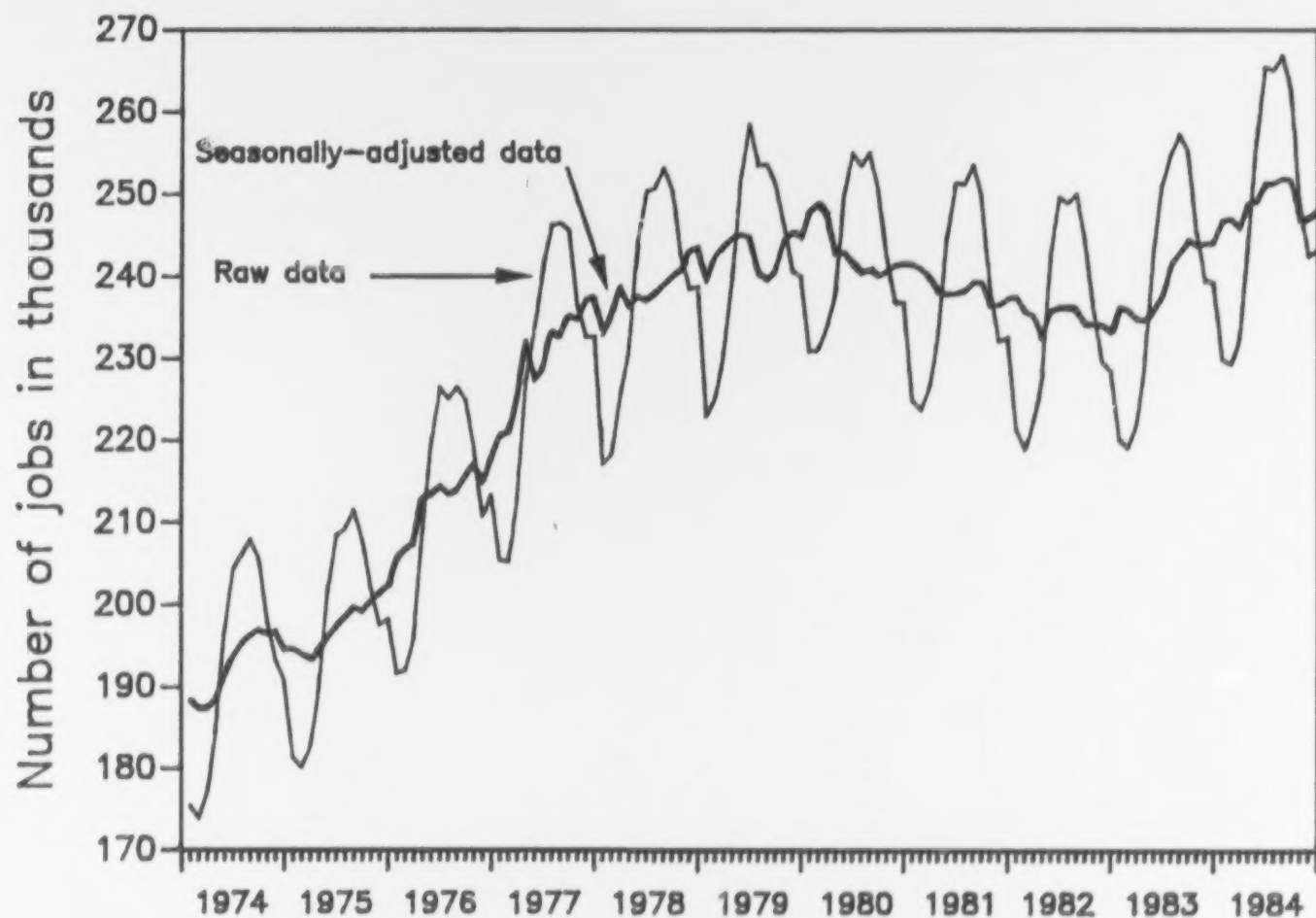


Figure 19-1. Trends in tourism-related employment in Michigan, 1974-1984.

SOURCE: Stynes, Daniel J. and Sz-Reng Chen. 1986. "Trends and Seasonal Patterns of Tourism-related Employment in Michigan." Research in progress, Dept. of Park and Recreation Resources, Michigan State University.

Table 19-11. Annual average number of jobs in tourism-related industries by Michigan county, 1974-1984.

County	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Alcona	127	135	148	190	189	173	158	174	186	194	194
Alger	302	278	275	257	200	168	143	134	143	158	162
Allegan	966	917	983	1,110	1,250	1,082	1,105	1,147	1,188	1,211	1,221
Alpena	737	784	815	949	918	856	879	800	715	670	713
Antrim	531	565	604	610	681	693	605	628	536	594	581
Arenac	400	477	516	475	513	542	569	560	558	579	556
Baraga	139	140	130	156	176	159	150	148	130	143	134
Barry	383	406	384	372	407	392	383	357	350	351	331
Bay	2,456	2,539	2,763	2,770	2,852	2,759	2,720	2,890	2,752	2,838	2,710
Benzie	229	229	274	280	315	310	306	348	343	385	395
Berrian	4,268	4,202	4,607	4,713	4,732	4,643	4,288	4,159	4,086	4,073	4,109
Branch	577	571	578	631	717	693	604	553	491	493	543
Calhoun	3,968	3,899	4,035	4,618	3,986	4,062	4,119	4,182	3,893	3,793	4,054
Cass	590	534	630	724	650	491	467	462	412	445	399
Charlevoix	803	811	731	906	833	1,010	890	821	882	874	894
Cheeboygan	503	611	678	759	827	792	769	837	821	867	826
Chippewa	676	690	770	734	952	684	652	662	685	697	659
Clare	563	532	547	561	560	542	526	550	554	547	528
Clinton	319	382	407	415	480	531	516	456	473	463	475
Crawford	337	379	460	464	418	499	517	527	574	528	539
Delta	1,010	1,064	1,159	1,226	788	707	696	706	717	898	857
Dickinson	418	457	462	516	612	586	587	659	627	609	614
Eaton	699	782	852	866	871	844	1,044	1,046	1,049	1,130	864
Emmet	994	1,020	1,116	1,172	1,347	1,226	1,098	1,048	1,024	1,009	1,014
Genesee	7,804	7,842	9,142	9,949	9,997	9,879	11,000	10,956	10,183	10,412	10,761
Gladwin	170	181	228	275	334	311	305	287	308	333	392
Gogebic	435	511	472	492	630	633	828	852	790	779	760
Gr. Traverse	1,841	1,964	2,168	2,249	2,592	2,897	2,896	2,878	2,877	3,237	3,214
Gratiot	648	590	605	737	741	697	619	525	492	496	613
Hillsdale	523	527	608	632	470	398	467	491	439	389	427
Houghton	559	636	726	736	1,249	892	753	784	744	735	730
Huron	596	606	629	602	540	623	639	615	653	683	708
Ingham	7,454	7,758	9,365	9,798	9,584	9,709	9,349	9,313	9,260	9,143	9,051
Ionia	712	666	683	762	766	725	695	641	608	674	669
Iosco	471	507	623	567	574	514	502	501	530	554	550
Iron	279	240	264	312	307	343	289	284	260	296	303
Isabella	1,190	1,232	1,347	1,517	1,604	1,556	1,581	1,611	1,456	1,456	1,539
Jackson	2,820	2,835	3,313	3,515	3,837	4,090	4,116	4,223	3,994	3,835	3,903
Kalamazoo	5,002	5,670	6,361	7,467	7,609	7,561	7,744	7,361	7,272	7,131	7,529
Kalkaska	190	223	241	221	211	258	245	252	252	205	196
Kent	11,489	11,854	12,981	13,725	14,449	13,176	13,278	14,496	15,652	16,802	17,474
Keweenaw	50	59	60	64	70	65	60	77	68	62	69
Lake	117	112	113	111	108	115	103	94	103	98	109
Lapeer	589	629	715	935	1,066	1,099	1,049	998	965	957	1,080
Leelanau	347	316	319	551	600	594	517	527	618	483	433
Lenawee	1,341	1,423	1,564	1,617	1,714	1,679	1,608	1,516	1,540	1,659	1,549
Livingston	985	1,105	1,613	1,758	1,873	1,913	1,861	1,829	1,813	1,829	2,239

Luce	205	200	216	251	206	207	211	184	152	133	151
Mackinac	634	661	652	772	848	792	756	802	897	903	928
Macomb	11,692	12,405	12,922	14,787	15,653	19,946	18,585	15,725	15,472	15,887	16,857
Manistee	388	466	511	557	571	596	503	534	525	519	499
Marquette	1,700	1,836	2,100	2,241	2,369	2,472	2,326	2,422	2,551	2,551	2,758
Mason	651	702	820	808	763	688	690	655	598	649	622
Mecosta	452	476	547	561	592	627	637	648	655	731	701
Meruminee	399	609	391	358	441	547	500	538	537	575	593
Midland	1,094	1,105	1,227	1,321	1,395	1,623	1,631	1,617	1,676	1,668	1,697
Missaukee	112	150	133	132	122	111	86	121	128	117	130
Monroe	1,740	1,700	1,779	1,933	2,011	1,961	1,913	1,864	1,805	1,903	1,953
Montcalm	718	707	725	720	754	723	797	818	822	843	844
Montmorency	141	146	169	216	265	216	229	241	219	212	232
Muskegon	2,834	2,823	2,940	3,137	3,371	3,454	3,679	3,631	3,705	3,605	3,722
Newaygo	336	374	365	360	415	423	413	453	467	497	563
Oakland	26,427	27,120	30,353	33,723	36,424	37,963	40,494	40,111	39,804	41,106	44,627
Oceana	252	287	349	300	360	363	466	463	400	400	421
Ogemaw	199	204	247	226	268	316	313	284	313	330	287
Ontonagon	209	202	224	208	198	174	193	217	217	189	157
Osceloa	178	205	212	237	229	255	257	250	240	253	193
Oscoda	125	128	153	105	90	100	92	93	91	118	113
Otsego	683	668	698	757	840	858	778	837	809	811	756
Ottawa	2,683	2,854	3,078	3,331	3,878	4,108	4,245	4,182	4,118	4,277	4,649
Presque	138	131	159	167	184	166	143	176	165	165	174
Roscommon	514	572	579	636	619	637	749	795	824	825	837
Saginaw	4,893	5,093	5,363	6,112	6,400	6,138	6,286	6,235	6,066	6,009	6,407
Sanilac	374	380	337	369	408	414	406	363	350	346	337
Schoolcraft	330	341	369	350	296	288	245	258	277	287	272
Shiawassee	898	980	998	1,018	1,001	983	921	841	808	898	856
St. Clair	2,457	2,548	2,627	2,628	2,616	2,487	2,374	2,347	2,388	2,419	2,519
St. Joseph	964	929	1,007	1,039	1,217	1,255	1,310	1,365	1,376	1,289	1,497
Tuscola	513	596	553	586	677	602	513	509	463	522	514
Van Buren	728	780	804	780	853	852	806	830	948	1,020	910
Washtenaw	5,632	5,524	6,074	6,921	7,483	7,465	8,063	8,014	8,400	8,808	8,915
Wayne	53,207	53,036	54,312	57,975	59,625	58,021	56,085	54,357	51,844	52,370	53,636
Wexford	651	720	770	817	772	833	760	712	776	711	811
Unallocated	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	6,430	5,893	6,657	8,470	9,645

NOTE: "Tourism-related industries" means SIC 446, SIC 554, SIC 555, SIC 556, SIC 581, SIC 701, SIC 702, SIC 703, and SIC 799.

SOURCE: Michigan Employment Security Commission.

Table 19-12. Average number of jobs in tourism-related industries by Michigan county by month, 1984.

County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
Alcona	177	173	160	166	198	206	231	230	216	207	190	168	194
Alger	118	120	128	123	151	214	247	249	219	142	127	109	162
Allegan	945	901	1,005	1,174	1,415	1,537	1,643	1,634	1,533	1,037	936	895	1,221
Alpena	662	675	690	742	796	825	711	681	663	733	690	682	713
Antrim	623	595	528	406	579	679	669	673	641	545	482	546	581
Arenac	465	440	453	509	579	629	671	686	644	555	548	489	556
Baraga	92	118	121	124	157	170	129	131	133	157	141	132	134
Barry	271	279	275	336	373	389	390	391	378	310	288	287	331
Bay	2,768	2,792	2,832	2,834	2,661	2,712	2,879	2,836	2,822	2,495	2,439	2,452	2,710
Benzie	368	358	283	216	288	478	587	624	469	372	289	402	395
Berrien	3,637	3,646	3,826	4,186	4,384	4,627	4,598	4,529	4,200	3,992	3,857	3,829	4,109
Branch	511	480	538	535	562	612	584	599	581	512	514	492	543
Calhoun	3,881	3,839	3,905	3,920	4,131	4,196	4,194	4,234	4,273	4,063	4,002	4,015	4,054
Cass	426	409	368	403	458	486	392	410	387	348	332	365	399
Charlevoix	977	968	877	574	666	832	1,215	1,252	1,088	843	673	763	894
Cheboygan	503	468	473	559	894	1,196	1,394	1,367	1,176	895	542	444	826
Chippewa	505	507	510	633	718	776	832	841	792	672	573	549	659
Clare	503	491	462	520	554	586	598	595	570	502	465	484	528
Clinton	444	456	466	501	531	565	489	505	483	423	420	414	475
Crawford	562	553	527	556	582	631	561	565	537	478	468	445	539
Delta	785	790	807	854	894	933	981	1,002	944	785	756	748	857
Dickinson	608	599	615	577	600	599	649	680	616	620	597	609	614
Eaton	798	784	787	862	922	963	926	944	935	804	838	804	864
Emmet	847	812	735	816	893	1,169	1,481	1,479	1,226	987	868	855	1,014
Genesee	10,028	10,024	10,329	10,750	11,237	11,459	11,390	11,368	11,120	10,550	10,412	10,461	10,761
Gladwin	320	309	299	326	406	463	470	470	446	421	408	368	392
Gogebic	1,073	1,058	976	721	544	609	635	629	610	614	717	932	760
Gr. Traverse	3,077	3,067	3,066	3,162	3,318	3,551	3,625	3,601	3,407	2,891	2,770	3,048	3,214
Gratiot	593	580	585	600	626	634	638	641	642	608	617	607	613
Hillsdale	388	392	404	441	442	479	472	467	454	408	394	385	427
Houghton	588	612	616	716	768	766	826	830	844	756	711	721	730
Huron	560	541	543	644	746	822	895	900	818	723	680	623	708
Ingham	8,977	8,986	8,936	9,145	9,349	9,462	8,989	9,066	9,323	8,831	8,805	8,742	9,051
Ionia	618	612	638	661	677	685	671	761	726	687	651	645	669
Iosco	424	422	462	534	591	641	662	689	661	533	498	479	550
Iron	297	288	284	259	289	308	357	339	318	294	286	320	303
Isabella	1,423	1,446	1,439	1,566	1,617	1,573	1,557	1,554	1,652	1,553	1,543	1,539	1,539
Jackson	3,580	3,529	3,584	3,809	3,989	4,173	4,087	4,098	4,156	3,975	3,923	3,935	3,903
Kalamazoo	6,972	6,985	7,000	7,854	8,084	8,182	7,655	7,631	7,783	7,479	7,333	7,388	7,529
Kalkaska	169	183	177	177	202	221	239	259	226	172	167	165	196
Kent	16,711	16,467	16,866	17,017	17,848	18,011	17,853	17,820	18,072	17,646	17,621	17,753	17,474
Keweenaw	12	13	14	26	45	146	153	166	136	56	33	31	69
Lake	89	84	86	98	117	118	123	125	125	126	115	96	109
Lapeer	947	947	980	1,042	1,092	1,118	1,235	1,254	1,232	1,054	1,036	1,025	1,080
Leelanau	247	231	208	239	348	535	741	822	731	429	366	299	433
Lenawee	1,300	1,350	1,386	1,485	1,564	1,658	1,712	1,745	1,690	1,601	1,547	1,551	1,549

Livingston	1,984	1,921	1,974	2,022	2,157	2,282	2,412	2,453	2,460	2,451	2,366	2,381	2,239
Luce	87	87	82	134	177	196	212	221	188	157	140	133	151
Mackinac	272	268	278	361	1,011	1,459	1,874	1,863	1,557	1,226	498	464	928
Macomb	15,654	15,566	15,733	16,587	17,232	17,841	17,826	17,934	17,643	17,085	16,627	16,557	16,857
Manistee	459	462	483	538	583	665	553	567	527	404	384	365	499
Marquette	2,512	2,480	2,491	2,598	2,694	3,005	3,059	3,181	2,974	2,744	2,685	2,678	2,758
Mason	406	409	439	559	703	803	890	871	781	585	523	493	622
Mecosta	652	676	659	721	704	737	735	743	734	689	698	664	701
Menominee	593	584	593	590	611	594	592	602	596	586	586	591	593
Midland	1,679	1,603	1,647	1,719	1,768	1,795	1,739	1,713	1,725	1,670	1,659	1,642	1,697
Missaukee	96	91	90	105	136	166	181	184	175	117	109	105	130
Monroe	1,696	1,707	1,842	2,165	2,271	2,321	2,058	2,125	1,989	1,797	1,742	1,722	1,953
Montcalm	721	739	773	851	850	926	919	923	882	874	860	808	844
Montmorency	176	177	164	184	254	271	294	302	278	251	231	198	232
Muskegon	3,348	3,320	3,424	3,410	3,608	3,935	4,159	4,254	3,938	3,829	3,668	3,770	3,722
Newaygo	483	513	577	502	555	591	595	643	649	565	556	522	563
Oakland	40,512	40,324	40,946	43,598	45,819	47,561	47,644	47,913	47,492	44,654	44,342	44,724	44,627
Oceana	256	263	275	331	503	576	651	643	596	346	309	303	421
Ogemaw	292	307	298	293	327	345	274	263	269	265	258	254	287
Ontonagon	140	133	136	136	153	156	193	199	194	153	149	138	157
Osceloa	165	145	180	161	166	206	213	217	210	220	220	217	193
Oscoda	97	99	98	98	111	126	124	130	121	118	121	113	113
Otsego	823	806	694	596	726	804	827	845	782	741	730	701	756
Ottawa	4,494	4,529	4,577	4,453	4,578	4,634	4,801	4,784	4,903	4,673	4,661	4,698	4,649
Presque	146	147	146	187	204	216	191	194	197	164	148	152	174
Roscommon	746	722	726	799	860	990	956	948	897	832	796	771	837
Saginaw	6,052	5,903	6,067	6,184	6,369	6,512	6,763	6,830	6,891	6,467	6,421	6,427	6,407
Sanilac	288	291	305	327	356	362	379	430	356	335	309	303	337
Schoolcraft	172	166	179	240	299	344	375	373	350	314	259	198	272
Shiawasse	750	758	826	858	887	933	926	923	929	839	830	809	856
St. Clair	2,339	2,346	2,382	2,369	2,616	2,738	2,738	2,761	2,720	2,455	2,397	2,372	2,519
St. Joseph	1,321	1,296	1,335	1,418	1,510	1,547	1,540	1,585	1,706	1,615	1,572	1,521	1,497
Tuscola	483	476	497	549	560	585	550	549	508	481	464	461	514
Van Buren	794	806	795	953	989	1,053	1,048	1,041	990	842	795	813	910
Washtenaw	8,629	8,691	8,778	9,191	9,554	9,655	8,785	8,827	8,977	8,704	8,615	8,569	8,915
Wayne	49,886	50,285	50,902	53,961	55,698	56,015	55,033	55,504	54,825	54,707	53,264	53,549	53,636
Wexford	782	769	770	791	856	870	849	887	843	754	730	832	811
Unallocated	8,533	8,662	8,794	9,283	9,488	9,818	10,185	10,134	10,286	10,172	10,162	10,222	9,645

NOTE: "Tourism-related industries" means SIC 446, SIC 554, SIC 555, SIC 556, SIC 581, SIC 701, SIC 702, SIC 703, and SIC 799.

SOURCE: Michigan Employment Security Commission.

CHAPTER 20

SALES AND USE TAX COLLECTIONS BY MICHIGAN COUNTY FOR SELECTED BUSINESS TYPES

Daniel M. Spotts

Introduction

This chapter presents county-level data on the sales and use tax collections of selected business types. When intelligently used with a full recognition of their limitations, these data are useful in documenting changes over time in the volume of economic activity within a given county. The Michigan Department of Treasury generously provided these data to us in response to a special request. The data are not available in any other publication. The Michigan Department of Treasury formerly published county-level sales and use tax collections data, but ceased to do so in 1975 because of budget cuts.

The tables in this chapter present data on selected types of businesses patronized by travelers in Michigan, including clothing stores. Data on the latter are included since "shopping for pleasure" is an important pursuit of many tourists, particularly those visiting northwest lower Michigan. The specific business categories for which data are presented are defined in Table 20-1. Local residents, as well as travelers, of course patronize virtually all of the types of businesses listed in this table, although their utilization of hotels, motels, and tourist courts is negligible. Consequently, with the exception of hotels, motels, and tourist courts, the data for a given business category cannot be considered an index of traveler expenditures. However, seasonal variations in these data can be largely attributed to influxes of tourist spending.

The data presented in this chapter, more than any other data in this book, are subject to abuse by individuals failing to familiarize themselves with their nature and limitations. Consequently it is absolutely essential that users of these data who do not wish to grossly mislead themselves or others understand these data and their limitations.

Sales and Use Tax Defined

The sales tax is a flat 4% tax on receipts for persons selling at retail in Michigan (Michigan Dept. of Treasury, 1985:6). The tax is levied on gross proceeds from sales at retail of tangible personal property. "Tangible personal property" means goods that can be possessed and exchanged, with the exception of real property. All prepared food and drink items (including alcoholic beverages) sold by eating and drinking places are subject to the sales tax (Michigan Dept. of Treasury, 1979:50).

The use tax is a 4% tax levied on interstate sales of tangible personal property, on the sale of leased wire communication services, and on the sale of transient hotel or motel room rentals. Only the latter type of sales are relevant here. The room use tax is levied on the rental of "rooms or lodging furnished by hotelkeepers, motel operators and other persons furnishing accommodations that are available to the public, on the basis of a commercial or business enterprise, irrespective of whether or not membership is required for use of the accommodations, except rooms and lodging rented for a continuous period of more than one month" (Michigan Dept. of Treasury, 1984:17). The types of establishments that must pay the room use tax include inns, motels, tourist houses, nudist camps, apartment hotels, resort lodges and cabins, and certain camps operated by other than

nonprofit organizations. Hospitals and nursing homes are not included (Michigan Dept. of Treasury, 1984:17).

The tax collection data presented in this chapter do not include interest or penalty revenue. The data presented for a given quarter represent the amount of sales and use tax liability incurred during that quarter rather than the amount of sales and use tax revenue received by the Department of Treasury during that quarter. The State of Michigan's room use tax is independent of other room use taxes levied by counties, assessment districts, and/or visitor and convention bureaus. That is, the Michigan room use tax is 4% of the price of a room, not 4% of the price of a room plus the cost of other assessments and/or use taxes. Many lodging establishments in Michigan pay both sales tax and use tax. They may, for example, pay sales tax on the sale of gifts and restaurant meals, and use tax on the rental of rooms. Since not all lodging establishments pay sales tax, however, room use tax collections are a more comprehensive indicator of travel activity in a given county.

Data are presented for each quarter of 1983 and 1984. These data are aggregations of monthly data that were provided to us by the Michigan Department of Treasury. Data are presented on a quarterly basis because some monthly data are limited by the fact that some firms pay sales and/or use tax on a quarterly or annual basis rather than on a monthly basis. Consequently the tax payments of such firms are included only in the third month of each quarter (i.e., March, June, September, and December), even though these firms may have transacted business during each of the three months in a given quarter.

In some counties, all or nearly all firms in a given business category may pay sales and/or use tax on a monthly basis. In such cases it may be possible to utilize these data to estimate the magnitude of tourist expenditures in a given county. The procedure involves: (1) dividing tax collections by 4% to determine the dollar volume of business in a given business category, (2) subtracting the portion of this figure attributable to local residents to determine the amount spent by tourists in a given business category, and (3) dividing these tourist expenditures by the proportion they represent of total tourist expenditures to determine the total amount spent by tourists in a given county. Spending by local residents is usually considered to be equal to the level of expenditures observed for some month during which tourism can be assumed to be non-existent or negligible (e.g., April). The proportion of total tourist expenditures spent in a given business category is usually obtained from local tourist surveys, the Census Bureau's National Travel Survey, or from AAA reports. Studies by Brueckheimer (1962) and McIntosh (1958) are examples of the application of this technique.

Data Limitations

The Chain-Reporting Problem

The sales and use tax owed by franchise corporations (e.g., Holiday Inns) are paid in a lump sum by the corporate headquarters rather than by each of their affiliated properties. Consequently these payments are recorded for the county or state containing the corporate headquarters. If the corporate headquarters is out-of-state, for example, payments would be included solely in the "out-of-state" row of the tables in this chapter rather than the rows for individual counties containing properties affiliated with this franchise corporation. If franchise businesses do a significant share of the business in a

given county, the sales and use tax data for that county will underestimate the volume of this business activity.

Classification Difficulties

When businesspersons apply for a sales tax license or a use tax registration, they complete an application that requires them to state which of the Department of Treasury's Business Classification Codes (BCC) "best describes" their "principal business activity."¹ These responses are the basis for Treasury's categorization of sales and use tax collections under specific business types.

Someone operating a hotel in most cases would select BCC 701 - "Hotels, Tourist Courts, Motels" as the best description of their "principal business activity." However, if this hotel contains a restaurant which the applicant considers his or her "principal business activity," then he or she may classify the entire enterprise under BCC 584 - "Hotel Dining Rooms." Similarly, those operating ski areas containing lodging facilities may classify their enterprises under BCC 794 - "Sports Promoters and Commercial Operators, Miscellaneous Amusement and Recreation Services" rather than under BCC 701 - "Hotels, Tourist Courts, Motels." Thus the sales and use tax collections recorded under various BCCs in this chapter may not include the payments of all enterprises involved in some way in the type of business included in that BCC.

Tax Cheating

Because of tax cheating, sales and use tax collections in some cases may not fully reflect business transactions. The Department of Treasury does not consider tax cheating to be a serious problem. However, the exact magnitude of the problem is unknown.

The above difficulties limit the usefulness of sales and use tax collections as indices of business volume. In particular, in counties that have numerous franchise businesses these data should not be used at all as estimators of business volume, and in counties that have few franchise businesses they should be considered only crude estimators of business volume.

These data are, however, useful in documenting trends in business activity. If it can be reasonably assumed that changes in tax collections in a given county and BCC are not the result of businesses (1) altering their business classification with the Department of Treasury, (2) changing their status as an independent or franchise business, and/or (3) increasing or decreasing tax cheating, then these shifts in tax collections can be attributed to changes in the volume of business activity in that county and BCC.

¹The Business Classification Codes employed by the Michigan Dept. of Treasury are not identical with the Standard Industrial Classification (SIC) codes employed by the federal government and the Michigan Employment Security Commission. While there are similarities between the two systems, there are also many differences. For example, BCC 557 is Watercraft Sales and Service, whereas SIC 557 is Motorcycle Dealers.

References

- Brueckheimer, William R. 1962. "Some Notes on the Use of Sales Tax Statistics in the Study of the Recreation Industry of Michigan." Papers of the Michigan Academy of Science, Arts, and Letters. 47:453-467.
- McIntosh, Robert W. 1958. "Measuring the 1957 Tourist and Resort Business in Michigan's Upper Peninsula." MSU Business Topics. 6(1):28-30.
- Michigan Department of Treasury. 1979. State of Michigan General and Specific Sales and Use Tax Rules. Lansing, MI: Michigan Dept. of Treasury, Sales and Use Tax Division.
- Michigan Department of Treasury. 1984. State of Michigan General Sales Tax Act, Use Tax Act. Lansing, MI: Michigan Dept. of Treasury.
- Michigan Department of Treasury. 1985. Business Guide to Understanding Michigan's Sales and Use Taxes. Lansing, MI: Michigan Dept. of Treasury.
- Pearson, Ross N. 1953. "Recreation and Its Significance in the Economy of Ogemaw County, Michigan." Unpublished Ph.D. dissertation, Department of Geography, University of Michigan.
- Verway, David I. 1975. "End of a Series." Michigan State Economic Record. 17(3):3f.

Table 20-1. Definitions of selected Business Classification Codes employed by the Michigan Department of Treasury.

Business Classification Code	Types of Businesses Included in Code
557	Watercraft Sales and Service
561	Mens and Boys Clothing
562	Womens Clothing, Bridal, Lingerie, Etc.
581	Class C Tavern, With Liquor, Food Incidental
582	Tavern, Beer and Wine only, Food Incidental
583	Night Clubs, Cabarets, Discotheques
584	Hotel Dining Rooms
585	Family Restaurants and Cafeterias
586	Lunch Counters, Dairy Bars, Fast Food Restaurants
595	Sporting Goods Stores, Bicycles, Small Arms, Ammunition, Tack Supplies, Etc.
701	Hotels, Tourist Courts, Motels

SOURCE: Michigan Department of Treasury. 1984. "Business Classification Codes," C-3401.

Table 20-2. Sales and use tax collections by Michigan county by Business Classification Code, First Quarter 1983.

County	Men's/ Boy's Clothing (BCC 561)	Women's Clothing (BCC 562)	Taverns and Clubs (BCC 581, 582, & 583)	Hotel Dining Rooms (BCC 584)	Family Rest- aurants (BCC 585)	Fast Food Rest- aurants (BCC 586)	Sport- ing Goods (BCC 595)	Motel/ Motel Sales Tax (BCC 701)	Motel/ Motel Use Tax (BCC 701)
Alcona	\$ 0	\$ 132	\$ 8,640	\$ 0	\$ 4,872	\$ 944	\$ 1,191	\$ 1,523	\$ 30
Alger	0	289	18,584	0	6,265	176	316	2,097	7,778
Allegan	4,783	5,640	53,216	0	86,718	10,647	2,495	11,918	10,313
Alpena	2,998	7,100	25,349	0	64,630	16,800	11,147	6,698	6,746
Antrim	189	0	29,518	0	17,872	926	8,199	299	2,902
Arenac	1,146	0	15,996	0	9,922	14,918	6,699	6,421	3,024
Baraga	0	97	4,841	0	6,767	598	1,392	1,074	502
Barry	0	1,033	19,901	0	35,627	1,811	10,777	0	317
Bay	3,414	45,222	103,280	0	203,964	44,776	46,128	3,264	12,635
Benzie	1,479	1,392	4,582	0	28,060	0	1,430	886	2,752
Berrien	37,723	21,434	122,919	228	177,343	103,222	25,322	23,091	25,484
Branch	4,029	3,630	20,775	0	48,792	3,677	6,382	769	3,749
Calhoun	4,124	13,887	90,211	0	715,402	106,900	15,936	11,353	23,979
Cass	1,433	3,014	35,173	0	17,783	9,835	1,236	76	2,410
Charlevoix	0	4,685	9,054	0	27,463	3,851	2,314	72,522	38,697
Cheboygan	1,236	526	19,219	0	18,906	8,968	1,388	4,680	8,567
Chippewa	2,422	509	31,723	0	49,976	16,498	8,111	4,053	10,187
Clare	2,791	1,031	19,822	0	24,707	3,243	647	11,519	4,429
Clinton	0	3,825	44,001	0	50,983	1,613	1,028	0	1,580
Crawford	0	1,354	11,323	0	14,591	10,023	1,028	14,237	18,924
Delta	3,212	40,488	44,303	0	98,170	2,359	8,076	9,639	8,869
Dickinson	6,905	6,446	21,208	0	22,902	13,172	4,722	10,403	9,294
Eaton	8,109	14,992	41,009	0	101,727	14,315	14,184	41,231	2,023
Emmet	0	1,981	42,519	0	51,791	6,873	33,048	25,267	41,863
Genesee	68,482	82,885	336,850	7,897	860,000	250,976	130,596	27,642	42,031
Gladwin	0	1,152	11,136	0	22,403	2,952	1,456	2,750	1,639
Gogebic	1,353	2,602	23,615	0	13,392	8,393	12,300	34,921	26,545
Grand Traverse	15,229	17,616	60,871	0	185,122	39,430	35,332	60,659	55,112
Gratiot	2,689	46,451	17,410	0	45,319	8,460	1,895	450	5,463
Hillsdale	3,442	2,028	18,674	0	64,895	12,250	1,733	129	2,671
Houghton	2,011	856	49,410	0	25,923	3,176	7,477	6,224	9,354
Huron	2,017	3,143	33,919	0	44,671	4,512	9,711	11,919	2,054
Ingham	46,732	106,338	315,711	2,403	538,308	206,422	37,734	14,113	27,908
Ionia	1,985	1,590	53,939	0	35,868	20,991	4,656	6,742	6,235
Iosco	0	2,846	26,713	499	322,444	8,857	3,746	5,217	5,958
Iron	1,653	2,611	13,976	0	15,631	1,945	3,676	1,264	2,618
Isabella	5,121	13,611	44,869	0	93,826	22,099	22,814	14,429	16,567
Jackson	24,503	4,603	112,325	0	325,176	82,113	17,940	22,859	32,076
Kalamazoo	100,081	59,654	147,785	0	348,461	280,489	35,087	37,275	29,047
Kalkaska	0	0	6,377	0	23,738	N.A.	795	4,401	3,485
Kent	73,682	501,704	340,930	0	1,504,738	155,096	130,031	121,344	128,951
Keweenaw	0	0	1,807	0	189	0	0	2,789	262
Lake	0	0	13,622	0	4,820	1,161	1,060	1,876	1,018
Lapeer	1,834	4,365	26,418	0	102,531	14,531	1,844	239	4,990

Leelanau	0	73	20,842	0	5,078	1,062	450	19,845	15,425
Lenawee	7,613	8,749	56,057	0	131,068	21,857	8,145	4,151	2,859
Livingston	2,217	3,648	35,685	0	84,412	10,443	12,601	10,461	323
Luce	0	0	3,776	0	6,690	1,322	2,338	1,180	1,117
MacKinnac	0	58	8,104	0	9,741	7,461	179	3,350	8,844
Macomb	136,310	52,564	579,752	1,039	1,786,167	274,488	138,928	39,051	72,851
Manistee	3,216	2,677	32,092	0	22,715	6,280	1,745	8,536	9,874
Marquette	486	12,519	57,976	0	125,751	46,350	19,200	19,701	11,491
Mason	4,759	1,975	24,325	0	58,909	12,911	3,906	5,690	9,151
Mecosta	5,261	286	34,538	0	30,968	21,655	13,880	7,839	9,685
Menominee	0	1,736	22,557	0	23,943	12,203	322	435	7,042
Midland	35,695	12,267	35,812	0	114,266	4,490	20,368	20,188	27,581
Missaukee	0	126	6,016	0	6,257	1,836	275	15	581
Monroe	7,431	5,929	78,262	0	86,611	13,439	25,740	12,132	9,292
Montcalm	0	5,919	32,156	1,219	42,824	4,076	13,246	3,392	1,077
Montmorency	275	0	7,829	0	7,629	1,159	551	1,386	2,202
Muskegon	21,783	7,382	109,246	0	190,169	80,053	26,448	15,757	17,111
Newaygo	8,395	8,969	15,898	0	36,905	5,704	3,916	1,767	529
Oakland	447,424	766,109	769,203	53,922	2,970,393	782,147	481,392	257,507	322,234
Oceana	0	0	15,544	0	14,712	1,840	2,731	6	836
Ogemaw	1,114	2,202	8,935	0	26,964	4,061	984	1,241	2,857
Ontonagon	1,162	0	13,171	0	11,642	597	1,631	3,071	16,764
Osceola	858	534	10,335	0	15,699	4,528	450	1,356	574
Oscoda	0	0	5,653	0	9,283	0	402	2,064	1,204
Otsego	1,184	3,595	10,127	0	73,711	362	3,566	16,972	26,112
Ottawa	31,486	18,598	59,280	0	189,023	61,893	42,657	37,454	5,702
Presque Isle	1,278	0	15,988	0	7,883	4,487	502	974	473
Roscommon	1,690	1,931	19,536	0	28,400	2,805	1,341	16,530	24,277
Saginaw	59,265	101,367	169,647	5,931	406,863	34,665	67,563	33,166	29,653
St. Clair	13,421	109,906	103,292	0	204,678	28,249	14,640	25,477	21,204
St. Joseph	4,515	8,355	67,366	901	126,886	26,318	6,990	5,409	3,688
Sanilac	0	2,235	23,636	0	22,622	8,534	1,049	7,429	1,603
Schoolcraft	0	0	7,879	0	5,985	436	1,318	387	1,551
Shiawassee	6,203	4,441	44,874	0	80,523	16,511	22,812	1,255	7,103
Tuscola	1,352	5,382	37,033	0	51,880	2,216	10,268	1,782	4,254
Van Buren	3,722	1,366	43,281	667	63,721	14,374	6,157	2,120	569
Washtenaw	57,055	46,740	159,832	31,149	478,028	125,407	41,279	29,927	45,562
Wayne	362,118	1,073,114	1,640,900	0	4,093,548	872,121	287,565	365,700	424,408
Wexford	7,402	10,215	23,888	0	54,560	5,144	7,494	8,988	10,653
Out of state	167,617	1,243,449	31,609	49,933	3,023,981	1,931,880	80,789	243,502	469,810
Total	\$1,839,201	\$4,559,301	\$6,935,703	\$155,806	\$21,193,902	N.A.	\$2,049,019	\$1,877,372	\$2,279,283

CAUTION: See discussion of data limitations in text.

NOTE: Details may not add to totals due to truncation of cents figures.

SOURCE: Michigan Department of Treasury, Systems Division.

Table 20-3. Sales and use tax collections by Michigan county by Business Classification Code, Second Quarter 1983.

County	Men's/ Boy's Clothing (BCC 561)	Women's Clothing (BCC 562)	Taverns and Clubs (BCC 581, 582, & 583)	Hotel Dining Rooms (BCC 584)	Family Rest- aurants (BCC 585)	Fast Food Rest- aurants (BCC 586)	Sport- ing Goods (BCC 595)	Hotel/ Motel Sales Tax (BCC 701)	Hotel/ Motel Use Tax (BCC 701)
Alcona	\$ 0	\$ 221	\$ 13,019	\$ 0	\$ 11,449	\$ 2,993	\$ 2,350	\$ 2,334	\$ 2,300
Alger	0	475	25,465	0	7,379	365	433	2,769	10,434
Allegan	6,949	8,013	78,771	0	124,122	24,664	4,269	17,739	27,188
Alpena	3,227	8,026	29,156	0	84,381	22,801	19,692	10,366	13,145
Antrim	447	0	20,032	0	27,460	1,206	7,947	16,290	23,916
Arenac	1,475	0	21,424	0	21,517	21,209	16,161	9,493	7,142
Baraga	0	88	6,085	0	8,446	3,203	1,113	1,590	1,398
Barry	0	1,526	22,548	0	47,789	6,258	10,982	955	761
Bay	3,455	41,638	106,177	213	235,873	67,288	82,109	4,394	19,655
Benzie	1,684	2,402	7,688	0	36,222	923	2,733	2,746	4,824
Berrien	40,538	25,512	156,605	201	242,046	147,511	47,689	30,308	43,780
Branch	5,527	5,634	21,918	0	60,336	9,279	15,398	2,888	9,151
Calhoun	4,498	12,622	91,345	0	770,644	108,031	31,682	14,706	38,357
Cass	2,488	5,242	48,427	0	19,587	17,560	3,628	396	6,540
Charlevoix	0	4,376	15,140	0	40,154	10,945	3,427	26,952	30,823
Cheboygan	1,628	1,029	24,569	2,471	29,725	14,103	5,234	6,432	23,566
Chippewa	2,743	637	37,122	249	90,469	19,000	11,055	6,591	21,961
Clare	2,866	1,052	23,180	0	32,944	9,671	305	13,061	7,168
Clinton	0	4,060	40,597	0	58,729	4,164	2,845	193	7,229
Crawford	0	1,852	14,449	0	23,334	15,106	2,227	19,592	31,371
Delta	3,370	48,719	49,940	0	112,718	13,717	12,282	15,542	16,473
Dickinson	7,667	9,146	26,534	0	27,326	21,251	4,951	11,674	9,866
Eaton	9,945	23,768	44,367	0	117,509	22,074	35,793	43,746	2,388
Emmet	0	10,026	54,035	0	86,551	15,403	20,877	31,036	56,505
Genesee	82,562	87,310	335,017	9,006	973,751	305,403	274,556	30,339	60,177
Gladwin	0	1,945	13,173	0	34,885	5,183	4,516	2,779	1,832
Gogebic	1,700	2,901	21,087	0	14,411	9,593	5,146	9,217	16,250
Grand Traverse	16,721	23,841	61,856	0	239,453	43,058	60,975	76,106	113,833
Gratiot	3,012	53,566	18,920	0	51,016	15,120	4,487	708	3,523
Hillsdale	3,775	9,853	19,620	0	79,946	15,767	5,425	387	3,248
Houghton	2,102	1,358	49,084	0	36,809	7,585	11,185	14,599	14,355
Huron	3,262	5,216	34,787	0	62,868	14,290	27,239	14,920	11,537
Ingham	59,260	102,155	318,230	3,545	579,182	253,420	62,018	18,044	33,322
Ionia	2,592	2,073	56,718	0	42,458	28,710	5,260	17,217	10,134
Iosco	0	4,871	29,300	783	49,058	15,572	8,328	7,472	18,445
Iron	1,911	3,251	13,681	0	24,226	3,250	843	1,467	6,087
Isabella	5,015	12,418	48,906	0	128,244	27,325	17,902	14,859	21,862
Jackson	24,201	5,434	124,720	0	364,773	140,999	37,001	20,170	46,173
Kalamazoo	98,941	62,907	153,171	0	381,246	318,965	79,835	41,603	38,098
Kalkaska	0	0	9,062	605	32,584	468	2,017	4,126	4,543
Kent	87,785	573,339	355,405	0	1,611,282	205,253	195,596	133,627	149,708
Keweenaw	0	0	2,213	0	580	1	0	2,645	1,987
Lake	0	0	17,779	0	7,959	6,765	2,885	6,569	7,991
Lapeer	2,342	5,707	27,983	2,950	112,810	21,964	3,040	221	12,730

Leelanau	0	0	30,046	464	14,491	3,250	1,585	13,207	16,451
Lenawee	8,648	9,035	52,683	0	156,490	32,814	17,495	4,589	4,050
Livingston	3,462	6,487	38,765	0	106,206	18,040	22,009	11,356	870
Luce	0	0	4,392	0	7,573	2,094	1,612	1,623	2,810
Mackinac	202	132	19,203	0	42,062	10,656	16,234	127,350	54,675
Macomb	172,136	73,440	645,936	1,108	2,104,795	368,922	228,255	49,259	93,793
Manistee	3,952	3,030	36,760	0	28,962	11,934	4,543	9,053	19,918
Marquette	954	15,260	66,794	0	153,008	58,870	26,676	25,176	20,362
Mason	6,272	3,282	28,002	0	88,688	21,894	9,290	6,173	18,368
Mecosta	4,714	606	33,951	0	31,467	27,802	16,055	13,986	12,546
Menominee	0	2,308	25,201	0	31,009	14,482	2,363	819	3,524
Midland	26,981	12,723	36,784	0	137,406	7,025	26,983	20,685	32,837
Missaukee	0	299	8,143	0	8,821	3,853	1,003	3	1,301
Monroe	8,523	3,744	90,752	0	105,791	25,436	34,422	8,693	14,730
Montcalm	0	6,459	37,232	1,429	60,920	10,980	19,255	2,864	2,214
Montmorency	556	0	9,150	0	15,735	2,554	1,251	2,825	3,969
Muskegon	19,752	8,583	108,384	0	222,399	104,636	57,156	25,883	32,889
Newaygo	8,949	8,974	22,185	0	49,877	15,994	8,569	2,162	710
Oakland	577,170	880,381	896,047	60,728	3,183,979	990,116	524,098	316,080	413,275
Oceana	0	0	22,643	0	21,825	5,513	3,947	2,041	3,379
Ogemaw	1,514	3,403	14,046	0	57,221	9,880	2,459	3,027	3,454
Ontonagon	2,090	0	13,089	0	11,971	1,882	1,337	2,988	15,952
Osceola	304	842	13,001	0	20,945	7,282	744	1,719	659
Oscoda	0	0	6,442	0	13,842	3,205	1,426	3,319	2,347
Otsego	1,281	2,422	12,131	0	93,037	168	4,294	12,875	30,072
Ottawa	32,032	21,916	62,059	0	250,388	83,291	70,196	62,137	9,228
Presque Isle	1,267	1	16,698	0	10,049	6,479	1,338	1,836	738
Roscommon	3,794	4,074	23,016	0	41,334	6,652	4,096	24,401	N.A.
Saginaw	55,881	117,315	199,685	5,721	507,170	40,035	62,782	41,759	51,179
St. Clair	15,178	128,674	113,679	0	255,706	37,350	29,493	35,757	32,784
St. Joseph	5,042	10,532	82,866	1,059	171,074	38,443	11,713	17,278	15,758
Sanilac	0	3,049	27,005	0	32,896	11,942	3,525	9,357	3,154
Schoolcraft	0	0	9,062	0	13,344	672	1,033	3,630	5,843
Shiawassee	6,577	5,804	47,628	0	94,237	25,986	34,345	355	9,279
Tuscola	2,091	-6,156	38,418	0	60,847	3,097	20,779	2,428	3,679
Van Buren	2,314	2,099	49,874	N.A.	89,149	22,365	16,071	10,278	12,013
Washtenaw	61,944	60,476	160,318	39,436	514,931	133,968	80,270	37,010	75,744
Wayne	454,771	1,553,594	1,700,862	0	4,478,166	1,050,623	435,813	429,105	533,112
Wexford	9,732	9,559	24,433	0	71,512	7,212	12,226	7,613	10,188
Out of State	217,077	1,596,312	33,711	52,337	3,606,323	2,081,791	118,429	289,721	575,118
Total	\$2,208,936	\$5,735,280	\$7,550,633	N.A.	\$24,110,025	\$7,326,633	\$3,088,717	\$2,349,465	N.A.

CAUTION: See discussion of data limitations in text.

NOTE: Details may not add to totals due to truncation of cents figures.

SOURCE: Michigan Department of Treasury, Systems Division.

Table 20-4. Sales and use tax collections by Michigan county by Business Classification Code, Third Quarter, 1983.

County	Men's/ Boy's Clothing (BCC 561)	Women's Clothing (BCC 562)	Taverns and Clubs (BCC 581, 582, 583)	Hotel Dining Rooms (BCC 584)	Family Rest- aurants (BCC 585)	Fast Food Rest- aurants (BCC 586)	Sport- ing Goods (BCC 595)	Hotel/ Motel Sales Tax (BCC 701)	Hotel/ Motel Use Tax (BCC 701)
Alcona	\$ 0	\$ 230	\$ 20,776	\$ 0	\$ 19,210	\$ 4,453	\$ 7,858	\$ 4,168	\$ 10,668
Alger	0	611	37,030	0	12,527	738	506	6,717	30,053
Allegan	10,047	10,639	104,072	0	159,336	31,366	4,441	21,555	44,032
Alpena	3,406	9,484	27,761	0	104,060	27,222	15,981	10,462	32,436
Antrim	485	0	30,778	0	49,946	2,063	13,255	44,628	43,509
Arenac	1,118	0	26,145	0	31,494	25,934	24,081	13,459	20,005
Baraga	0	362	6,761	0	11,163	4,370	2,086	1,171	3,994
Barry	0	1,252	25,704	0	60,888	6,508	15,563	2,573	2,073
Bay	4,543	43,108	106,833	430	249,553	74,592	76,470	4,284	29,568
Benzie	3,433	4,669	10,850	0	76,580	1,595	9,515	4,779	22,622
Berrien	37,648	26,462	182,018	254	286,754	170,914	49,234	40,389	69,852
Branch	3,928	4,820	24,487	0	69,474	12,380	16,481	2,374	10,312
Calhoun	4,509	10,546	91,139	0	894,781	121,476	29,663	16,088	40,756
Cass	3,151	6,548	63,784	0	21,611	18,336	3,320	1,839	11,481
Charlevoix	0	9,545	24,121	0	90,266	19,231	5,010	54,492	78,599
Cheboygan	1,511	1,246	30,154	8,845	46,225	21,485	7,070	17,013	60,104
Chippewa	3,123	411	41,395	537	159,441	19,276	10,706	16,710	59,657
Clare	3,568	1,685	27,512	0	38,915	13,280	232	15,854	10,945
Clinton	0	4,700	34,616	0	64,772	4,748	2,053	0	2,816
Crawford	0	2,326	20,535	0	38,514	9,964	4,200	24,641	48,242
Delta	4,363	61,213	53,401	0	137,787	20,658	13,506	21,512	53,403
Dickinson	8,835	9,405	27,794	0	31,008	22,366	4,031	14,111	18,591
Eaton	7,753	17,938	43,729	0	117,413	21,641	44,578	33,219	2,962
Emmet	4,515	37,930	105,928	0	178,151	35,325	41,666	83,125	235,138
Genesee	72,462	100,511	345,102	7,910	1,042,292	329,337	250,615	37,757	68,788
Gladwin	0	2,283	16,255	0	42,213	5,165	6,024	3,217	2,235
Gogebic	2,419	2,857	24,604	0	16,751	9,764	1,695	13,360	24,833
Grand Traverse	24,994	28,171	79,079	0	455,695	56,628	72,817	80,881	264,727
Gratiot	2,813	62,239	18,999	0	54,261	17,615	6,084	712	15,134
Hillsdale	4,537	2,539	23,676	0	142,328	15,839	5,568	1,489	3,480
Houghton	2,470	1,486	57,760	0	50,320	9,001	9,841	26,619	28,145
Huron	3,216	4,711	37,109	0	85,711	19,342	22,660	28,982	30,451
Ingham	58,296	96,491	318,905	4,005	587,653	250,957	49,022	16,967	38,592
Ionia	2,470	2,002	67,528	0	49,485	40,419	5,151	20,590	9,946
Iosco	0	7,095	36,587	732	83,738	20,715	11,201	9,950	43,123
Iron	2,207	3,760	16,070	0	31,782	4,620	866	3,828	115,105
Isabella	4,395	12,801	62,812	0	136,175	37,955	17,141	16,987	27,670
Jackson	22,067	6,795	126,669	0	396,894	148,757	31,815	19,769	48,122
Kalamazoo	110,018	70,345	147,985	0	388,634	351,579	67,526	47,401	45,178
Kalkaska	0	353	13,674	2,609	40,736	143	3,466	3,769	4,337
Kent	83,643	566,360	334,479	0	1,425,554	228,003	170,667	174,621	194,364
Keweenaw	0	0	2,373	0	6,225	32	0	9,754	20,919
Lake	0	0	21,734	0	10,558	9,360	4,046	11,087	30,672
Lapeer	2,408	7,295	33,115	1,914	121,138	27,529	4,437	446	2,415

Leelanau	0	68	50,111	4,837	40,018	7,371	6,429	48,538	90,079
Lenawee	8,287	9,147	60,086	0	167,964	40,161	21,509	14,238	6,767
Livingston	3,057	7,063	40,388	0	109,331	25,457	19,505	12,434	806
Luce	0	0	4,869	0	11,904	3,711	1,503	2,660	7,905
Mackinac	535	212	40,882	0	131,785	22,081	11,673	352,492	173,741
Macomb	139,600	70,554	628,609	597	2,058,929	344,946	182,848	45,057	89,910
Manistee	5,132	2,815	45,073	0	45,828	17,471	7,561	25,563	39,527
Marquette	865	15,246	72,818	0	167,140	77,610	24,805	29,402	33,330
Mason	8,015	3,653	37,513	0	135,370	32,613	18,518	7,211	45,686
Mecosta	6,146	1,080	38,039	0	37,852	16,802	18,210	11,890	22,524
Menominee	0	2,380	26,903	0	37,754	20,690	2,272	1,786	6,913
Midland	31,407	17,347	39,436	0	152,759	7,279	26,583	19,391	45,235
Missaukee	0	401	16,979	0	10,357	5,134	1,434	4	1,984
Monroe	9,421	5,007	87,441	0	117,300	19,387	26,806	12,125	15,463
Montcalm	0	6,253	38,395	976	67,666	13,815	19,536	2,909	3,257
Montmorency	673	0	11,191	0	24,437	3,979	2,308	4,255	8,101
Muskegon	21,928	9,934	106,761	0	263,949	117,596	61,743	28,137	36,380
Newaygo	11,119	12,076	25,729	0	59,465	15,401	10,220	3,260	1,998
Oakland	473,532	817,716	770,524	56,295	3,368,999	1,083,774	609,946	276,873	438,144
Oceana	0	0	32,071	0	29,739	7,787	9,199	8,027	16,317
Ogemaw	1,539	3,583	16,088	0	80,394	12,840	3,524	5,919	5,951
Ontonagon	2,107	0	15,225	0	16,053	3,528	1,388	4,657	22,685
Osceola	0	1,219	13,967	0	25,370	8,082	1,079	1,542	997
Oscoda	0	0	7,329	0	24,636	4,919	1,096	4,538	3,267
Otsego	1,893	6,537	14,885	0	107,649	197	6,924	28,120	67,799
Ottawa	38,490	22,547	77,197	0	265,343	103,981	60,410	89,672	72,943
Presque Isle	1,727	286	20,569	0	15,783	8,563	1,179	4,268	3,614
Roscommon	4,950	6,540	34,926	0	69,388	14,837	7,012	52,805	89,624
Saginaw	53,059	130,701	187,889	5,713	609,047	51,001	68,071	49,765	82,306
St. Clair	15,733	62,169	128,347	0	313,684	51,206	38,997	45,984	46,029
St. Joseph	5,539	11,564	92,434	1,076	179,443	37,910	13,542	15,394	19,316
Sanilac	48	3,192	32,462	0	38,616	15,160	7,328	11,475	5,831
Schoolcraft	0	0	10,038	0	24,726	1,311	1,250	12,352	37,011
Shiawassee	3,466	5,439	45,620	0	101,750	29,552	35,768	312	7,868
Tuscola	2,269	6,978	43,413	0	59,463	3,943	18,096	2,322	5,065
Van Buren	4,062	2,723	59,759	3,256	111,223	26,309	12,389	34,682	36,713
Washtenaw	62,566	72,156	173,860	31,550	521,434	149,492	79,725	34,789	88,883
Wayne	407,178	1,335,072	1,645,395	0	4,400,295	1,120,893	373,175	456,908	554,381
Wexford	10,841	14,854	28,924	0	76,953	9,853	10,302	10,828	20,358
Out of state	250,425	1,703,080	34,128	43,579	3,794,982	2,158,316	132,679	318,287	621,250
Total	\$2,090,047	\$5,612,921	\$7,808,356	\$175,135	\$25,992,916	\$7,967,762	\$3,098,807	\$3,074,348	\$4,836,144

CAUTION: See discussion of data limitations in text.

NOTE: Details may not add to totals due to truncation of cents figures.

SOURCE: Michigan Department of Treasury, Systems Division.

Table 20-5. Sales and use tax collections by Michigan county by Business Classification Code, Fourth Quarter, 1983.

County	Men's/ Boy's Clothing (BCC 561)	Women's Clothing (BCC 562)	Taverns and Clubs (BCC 581, 582, & 583)	Hotel Dining Rooms (BCC 584)	Family Rest- aurants (BCC 585)	Fast Food Rest- aurants (BCC 586)	Sport- ing Goods (BCC 595)	Hotel/ Motel Sales Tax (BCC 701)	Hotel/ Motel Use Tax (BCC 701)
Alcona	\$ 0	\$ 0	\$ 16,526	\$ 0	\$ 11,499	\$ 967	\$ 2,779	\$ 3,184	\$ 2,409
Alger	0	393	27,616	0	7,000	239	673	1,649	10,037
Allegan	8,099	7,617	59,508	0	109,987	17,470	2,779	11,227	9,794
Alpena	6,177	11,973	27,857	0	82,404	21,046	21,147	18,242	8,236
Antrim	379	0	19,813	0	23,391	2,830	4,979	12,983	16,384
Arenac	2,090	0	21,526	0	16,969	17,974	6,370	7,072	8,595
Baraga	0	1,048	6,031	0	9,072	951	2,410	663	1,623
Barry	1,230	1,528	19,086	0	48,558	2,555	20,046	71	1,122
Bay	8,276	70,368	102,572	0	245,863	67,267	50,637	3,342	22,046
Benzie	2,302	3,201	6,964	0	36,454	0	2,644	2,683	5,310
Berrien	58,854	26,942	153,584	225	209,622	136,833	33,791	43,508	31,989
Branch	9,009	5,431	24,979	0	66,288	6,041	11,224	567	4,938
Calhoun	7,319	13,926	93,498	0	732,823	103,076	20,965	14,018	25,689
Cass	4,451	3,065	46,358	0	17,954	11,907	1,997	350	5,410
Charlevoix	0	4,346	14,171	0	32,907	4,816	2,561	37,300	23,535
Cheboygan	2,799	285	20,622	1,000	24,314	12,601	2,385	6,094	11,353
Chippewa	4,144	164	36,333	260	81,085	16,427	13,110	4,642	13,213
Clare	5,614	1,483	28,789	0	31,756	3,494	838	13,198	5,690
Clinton	0	5,312	38,829	0	58,201	3,329	914	0	2,097
Crawford	0	2,581	13,797	0	22,356	3,625	2,905	17,220	22,075
Delta	8,315	69,997	54,377	0	100,641	13,991	11,932	12,850	20,081
Dickinson	6,535	12,011	31,546	0	25,938	19,787	6,797	11,769	12,663
Eaton	14,353	21,485	47,327	0	110,093	17,282	25,773	40,058	2,104
Emmet	0	7,057	53,052	0	58,412	9,994	45,676	27,002	49,717
Genesee	129,192	140,752	375,357	9,711	1,012,839	299,909	211,680	36,181	134,564
Gladwin	0	2,211	14,858	0	29,439	3,756	2,627	3,146	1,329
Gogebic	4,228	2,905	23,285	0	13,507	8,359	8,492	18,843	13,769
Grand Traverse	28,090	20,753	62,856	0	289,989	42,610	60,227	64,387	85,448
Gratiot	5,989	71,894	19,369	0	44,028	22,023	3,878	880	7,788
Hillsdale	6,334	3,680	19,466	0	81,636	11,531	3,724	1,407	1,957
Houghton	2,189	1,405	53,631	0	24,283	4,985	13,333	14,066	11,982
Huron	4,462	6,896	34,903	0	61,037	12,355	7,151	11,558	5,631
Ingham	94,688	124,353	330,282	4,379	601,013	255,587	47,633	24,131	31,593
Ionia	3,764	2,304	68,617	0	43,472	28,047	4,113	16,211	10,117
Iosco	0	6,165	28,316	498	44,335	9,705	4,750	3,589	12,962
Iron	3,349	3,612	21,496	0	25,786	3,525	3,602	2,536	4,170
Isabella	8,846	17,096	61,573	0	123,225	41,825	20,491	14,689	20,147
Jackson	37,392	5,114	120,794	0	375,088	124,980	28,513	19,313	36,104
Kalamazoo	160,660	75,067	172,997	0	387,886	329,181	50,914	41,188	37,946
Kalkaska	0	360	7,959	1,541	29,589	0	2,474	4,232	2,356
Kent	118,554	762,419	363,530	0	1,422,999	207,909	140,197	198,690	166,519
Keweenaw	0	0	1,652	0	1,330	0	0	2,263	2,915
Lake	0	0	22,150	0	8,826	3,143	3,561	9,543	7,798
Lapeer	4,590	8,488	28,405	3,135	106,922	21,403	1,506	252	14,953

Leelanau	0	21	27,246	578	10,048	1,016	940	13,991	15,767
Lenawee	15,147	10,230	62,704	0	161,049	25,463	15,823	11,319	4,381
Livingston	5,841	10,252	36,351	0	95,613	23,075	20,295	11,947	286
Luce	0	0	3,172	0	5,533	2,164	1,298	1,467	1,647
Mackinac	0	140	11,629	0	25,825	9,353	3,307	59,632	14,561
Macomb	304,330	83,309	656,514	4,098	2,031,566	327,288	145,997	45,831	81,658
Manistee	6,063	2,551	36,914	0	29,360	6,382	4,519	10,750	14,918
Marquette	1,520	16,138	65,127	0	143,958	111,567	30,107	23,057	17,252
Mason	10,140	2,607	28,116	0	69,643	17,349	11,417	2,335	11,649
Mecosta	7,224	376	39,844	0	35,866	13,507	20,615	4,531	17,479
Menominee	0	2,602	32,442	0	32,422	13,618	1,467	1,403	3,481
Midland	55,958	21,385	38,346	0	141,510	5,391	29,254	24,724	31,814
Missaukee	0	429	10,034	0	7,572	1,881	698	2	989
Monroe	8,956	5,941	82,305	0	107,109	14,293	38,993	9,644	10,470
Montcalm	0	7,295	36,196	351	61,747	5,690	21,039	2,711	1,151
Montmorency	398	0	11,267	0	14,162	2,575	1,809	1,135	3,414
Muskegon	36,299	9,318	109,129	0	236,439	95,401	39,114	7,112	14,448
Newaygo	17,722	12,829	26,525	0	46,705	4,697	10,145	2,170	7,418
Oakland	836,145	998,637	777,160	65,026	3,314,706	982,883	924,507	327,119	330,602
Oceana	0	0	19,446	0	19,082	3,475	2,817	95	1,152
Ogemaw	2,354	3,740	16,920	0	59,547	4,763	4,323	3,995	3,115
Ontonagon	2,715	0	12,500	0	8,854	1,826	2,138	2,997	13,763
Osceola	0	1,360	12,386	0	21,803	5,490	1,043	1,600	692
Oscoda	0	0	7,076	0	15,904	1,666	1,525	4,304	2,071
Otsego	2,407	5,473	13,596	0	58,784	504	8,059	19,941	36,763
Ottawa	49,741	22,245	64,690	0	210,209	78,709	49,516	59,128	24,176
Presque Isle	2,259	336	18,963	0	11,692	5,292	1,147	1,979	1,050
Roscommon	5,672	3,509	28,652	0	33,390	7,203	1,551	26,940	29,682
Saginaw	95,309	181,486	194,432	6,187	558,883	54,098	80,368	44,973	71,593
St. Clair	28,975	114,475	108,579	202	233,959	40,197	26,049	32,963	28,466
St. Joseph	7,067	15,438	77,953	1,120	140,152	32,761	10,305	11,856	9,678
Sanilac	724	5,816	30,931	0	31,145	10,524	5,947	7,911	2,510
Schoolcraft	0	99	9,789	0	14,370	418	585	5,255	10,916
Shiawassee	9,399	8,835	48,919	0	94,380	22,797	24,534	2	5,665
Tuscola	4,194	7,251	43,637	0	60,058	2,739	7,403	3,018	4,185
Van Buren	4,264	2,514	51,130	533	72,414	14,046	7,557	5,381	5,814
Washtenaw	126,768	84,501	171,492	42,108	523,306	144,839	77,184	42,975	71,450
Wayne	702,067	1,920,683	1,661,048	0	4,609,544	1,049,815	362,156	455,774	502,526
Wexford	14,357	14,310	29,289	0	56,935	4,754	36,361	12,741	11,865
Out of state	406,532	2,552,381	37,791	51,069	3,829,015	1,942,617	221,267	337,843	600,696
Total	\$3,532,911	\$7,654,304	\$7,546,754	\$192,043	\$24,125,192	\$7,017,582	\$3,166,508	\$2,419,465	\$2,947,498

CAUTION: See discussion of data limitations in text.

NOTE: Details may not add to totals due to truncation of cents figures.

SOURCE: Michigan Department of Treasury, Systems Division.

Table 20-6. Sales and use tax collections by Michigan county by Business Classification Code, totals for 1983.

County	Men's/ Boy's Clothing (BCC 561)	Women's Clothing (BCC 562)	Taverns and Clubs (BCC 581, 582, & 583)	Hotel Dining Rooms (BCC 584)	Family Rest- aurants (BCC 585)	Fast Food Rest- aurants (BCC 586)	Sport- ing Goods (BCC 595)	Hotel/ Motel Sales Tax (BCC 701)	Hotel/ Motel Use Tax (BCC 701)
Alcona	\$ 0	\$ 584	\$ 58,971	\$ 0	\$ 47,036	\$ 9,363	\$ 14,184	\$ 11,214	\$ 15,411
Alger	0	1,772	108,703	0	33,176	1,520	1,930	13,239	58,306
Allegan	29,886	31,915	295,578	0	480,169	84,152	13,990	62,443	91,332
Alpena	15,813	36,588	110,131	0	335,481	87,873	67,974	45,773	60,569
Antrim	1,504	0	100,151	0	118,675	7,030	34,385	74,206	86,716
Arenac	5,835	0	85,101	0	79,909	80,042	53,317	36,450	38,772
Barage	0	1,599	23,722	0	35,455	9,127	7,008	4,503	7,521
Barry	1,231	5,344	87,251	0	192,868	17,136	57,375	3,601	4,278
Bay	19,693	200,342	418,875	643	935,259	253,928	255,350	15,291	83,910
Benzie	8,904	11,671	30,089	0	177,323	2,520	16,328	11,099	35,514
Berrien	174,769	100,356	615,139	910	915,770	558,485	156,041	137,302	171,110
Branch	22,499	19,518	92,166	0	244,895	31,383	49,490	6,604	28,157
Calhoun	20,455	50,987	366,208	0	3,113,653	439,487	98,251	56,170	128,787
Cass	11,529	17,874	193,756	0	76,939	57,643	10,186	2,665	25,848
Charlevoix	0	22,958	62,495	0	190,796	38,848	13,317	191,272	171,657
Cheyboygan	7,180	3,092	94,576	12,318	119,175	57,163	16,085	34,224	103,596
Chippewa	12,438	1,727	146,584	1,049	380,975	71,206	42,988	32,004	105,022
Clare	14,843	5,255	99,307	0	128,328	29,694	2,025	53,637	28,235
Clinton	0	17,902	158,061	0	232,691	13,859	6,846	193	13,727
Crawford	0	8,118	60,116	0	98,800	38,723	10,366	75,696	120,618
Delta	19,265	220,422	202,037	0	449,322	50,729	45,802	59,547	98,831
Dickinson	29,947	37,014	107,096	0	107,178	76,582	20,505	47,963	50,420
Eaton	40,166	78,189	176,451	0	446,747	75,317	120,333	158,259	9,482
Emmet	4,515	56,999	255,542	0	374,912	67,600	141,271	166,435	383,230
Genesee	352,705	411,462	1,392,341	34,527	3,888,887	1,185,631	867,454	131,925	305,567
Gladwin	0	7,594	55,428	0	128,947	17,062	14,629	11,898	7,041
Gogebic	9,705	11,271	92,603	0	58,067	36,114	27,637	76,346	81,403
Grand Traverse	85,039	90,386	264,673	0	1,170,265	181,732	229,357	282,040	519,126
Gratiot	14,509	234,157	74,703	0	194,629	63,223	16,348	2,756	31,914
Hillsdale	18,094	18,106	81,451	0	368,810	55,394	16,455	3,416	11,362
Houghton	8,778	5,110	209,892	0	137,341	24,751	41,841	61,515	63,840
Huron	12,962	19,971	140,729	0	254,293	50,503	66,767	67,384	49,678
Ingham	258,983	429,343	1,283,145	14,337	2,306,163	966,391	196,412	73,262	131,421
Ionia	10,817	7,975	246,812	0	171,288	118,173	19,186	60,764	36,439
Iosco	0	20,983	120,924	2,518	499,581	54,854	28,029	26,232	80,494
Iron	9,127	13,238	65,232	0	97,430	13,345	8,991	9,100	127,986
Isabella	23,382	55,933	218,174	0	481,476	129,209	78,351	60,970	86,249
Jackson	108,167	21,952	484,518	0	1,461,935	496,855	115,274	82,117	162,479
Kalamazoo	469,705	267,978	621,956	0	1,506,233	1,280,218	233,368	167,472	150,274
Kalkaska	0	713	37,077	4,759	126,653	974	8,757	16,533	14,728
Kent	363,670	2,403,827	1,394,360	0	5,964,578	796,266	636,496	628,287	639,548
Keweenaw	0	0	8,055	0	8,330	33	0	17,457	26,088
Lake	0	0	75,294	0	32,169	20,435	11,559	29,081	47,483
Lapeer	11,178	25,859	115,928	8,004	443,405	85,433	10,832	1,160	35,093

Leelanau	0	164	128,249	5,881	69,640	12,704	9,418	95,587	137,726
Lenawee	39,700	37,166	231,539	0	616,577	120,301	62,977	34,303	18,063
Livingston	14,582	29,475	151,202	0	395,570	77,019	74,416	46,204	2,291
Luce	0	0	16,221	0	31,705	9,296	6,757	6,936	13,485
Mackinac	739	543	79,825	0	209,419	49,556	31,397	542,830	251,827
Macomb	752,380	279,873	2,510,829	6,847	7,981,462	1,315,651	696,034	179,203	338,217
Manistee	18,369	11,080	150,848	0	126,868	42,074	18,374	53,908	84,244
Marquette	3,829	59,168	262,729	0	589,864	294,401	100,792	97,341	82,439
Mason	29,191	11,522	117,963	0	352,616	84,772	43,136	21,414	84,860
Mecosta	23,350	2,354	146,383	0	136,158	79,771	68,767	38,251	62,239
Menominee	0	9,032	107,116	0	125,133	60,998	6,428	4,449	20,965
Midland	150,047	63,728	150,390	0	545,947	24,189	103,193	84,993	137,473
Missaukee	0	1,260	41,178	0	33,013	12,709	3,414	30	4,861
Monroe	34,334	20,627	338,770	0	416,816	72,560	125,966	42,599	49,961
Montcalm	0	25,934	143,985	3,979	233,162	34,569	73,081	11,883	7,705
Montmorency	1,907	0	39,450	0	61,967	10,272	5,925	9,606	17,693
Muskegon	99,768	35,220	433,538	0	912,961	397,690	184,467	76,894	100,835
Newaygo	46,189	42,853	90,348	0	192,959	41,802	32,855	9,366	10,659
Oakland	2,334,276	3,462,851	3,212,950	235,976	12,838,082	3,838,925	2,539,949	1,177,385	1,504,260
Oceana	0	0	89,714	0	85,364	18,620	18,699	10,175	21,689
Ogemaw	6,527	12,935	55,998	0	224,132	31,550	11,295	14,187	15,383
Ontonagon	8,079	0	53,989	0	48,527	7,838	6,499	13,719	69,166
Osceola	1,163	3,961	49,693	0	83,823	25,387	3,320	6,224	2,927
Oscoda	0	0	26,512	0	63,670	9,795	4,453	14,233	8,895
Otsego	6,770	18,032	50,751	0	333,185	1,236	22,850	77,913	160,751
Ottawa	151,756	85,312	263,241	0	914,967	327,880	222,783	248,397	112,055
Presque Isle	6,536	624	72,230	0	45,412	24,826	4,171	9,112	5,879
Roscommon	16,110	16,059	106,138	0	172,518	31,502	14,005	120,683	N.A.
Saginaw	263,520	530,875	751,662	23,559	2,081,969	179,805	278,788	169,669	234,738
St. Clair	73,313	415,229	453,914	202	1,008,031	157,008	109,183	140,188	128,488
St. Joseph	22,167	45,894	320,633	4,161	617,559	135,437	42,554	49,941	48,446
Sanilac	773	14,299	114,046	0	125,285	46,166	17,854	36,176	13,103
Schoolcraft	0	99	36,777	0	58,430	2,840	4,192	21,630	55,327
Shiawassee	25,651	24,526	187,052	0	370,897	94,853	117,463	1,930	29,920
Tuscola	9,911	25,771	162,511	0	232,253	12,001	56,552	9,556	17,188
Van Buren	14,367	8,708	204,060	6,724	336,512	77,101	42,180	52,466	55,112
Washtenaw	308,339	263,880	665,518	144,247	2,037,704	553,713	278,464	144,705	281,645
Wayne	1,926,140	5,882,468	6,648,224	0	17,581,559	4,093,458	1,458,714	1,707,494	2,014,433
Wexford	42,337	48,943	106,545	0	259,966	26,878	65,389	40,174	53,070
Out of State	1,041,657	7,095,227	137,250	196,924	14,254,306	8,114,610	553,169	1,189,358	2,266,880
Total	\$9,671,100	\$23,561,811	\$29,841,462	N.A.	\$95,422,040	N.A.	\$11,403,055	\$9,720,654	N.A.

CAUTION: See discussion of data limitations in text.

NOTE: Details may not add to totals due to truncation of cents figures.

SOURCE: Michigan Department of Treasury, Systems Division.

Table 20-7. Sales and use tax collections by Michigan county by Business Classification Code, First Quarter 1984.

County	Watercraft Sales/ Service (BCC 557)	Men's/ Boy's Clothing (BCC 561)	Women's Clothing (BCC 562)	Taverns and Clubs (BCC 581, 582, & 583)	Hotel Dining Rooms (BCC 584)	Family Rest- aurants (BCC 585)	Fast Food Rest- aurants (BCC 586)	Sport- ing Goods (BCC 595)	Hotel/ Motel Sales Tax (BCC 701)	Hotel/ Motel Use Tax (BCC 701)
Alcona	\$ 0	\$ 0	\$ 0	\$ 10,161	\$ 0	\$ 4,722	\$ 604	\$ 823	\$ 1,315	\$ 698
Alger	0	0	0	17,428	0	2,913	188	261	1,037	8,158
Allegan	1,553	5,088	5,143	53,062	0	91,890	13,407	2,899	12,588	7,695
Alpena	0	2,542	6,788	28,813	0	78,587	23,758	14,053	6,365	6,256
Antrim	4,956	167	0	18,453	0	22,260	1,857	7,197	15,405	16,903
Arenac	3,187	1,467	0	17,722	0	11,842	12,496	2,596	4,605	2,100
Baraga	0	0	704	5,542	0	7,487	806	1,342	800	1,082
Barry	215	1,386	974	19,462	0	49,336	1,828	12,114	0	1,007
Bay	13,301	1,713	46,826	102,035	0	227,072	70,937	52,039	2,822	18,470
Benzie	111	1,429	1,884	4,981	0	32,861	0	1,552	1,723	2,157
Berrien	14,077	27,610	21,650	152,324	0	198,179	141,692	27,668	34,582	23,438
Branch	475	3,203	4,579	22,745	0	58,137	5,840	6,209	645	3,252
Calhoun	2,034	3,247	6,445	95,562	0	660,065	98,683	15,906	13,126	27,193
Cass	2,172	1,489	1,835	41,544	0	18,485	12,774	1,151	129	797
Charlevoix	1,362	0	2,361	12,111	0	26,775	4,757	2,084	78,799	42,925
Cheboygan	16	1,567	807	18,942	0	20,117	11,669	1,480	4,613	2,835
Chippewa	0	2,266	422	29,687	231	75,477	18,592	7,476	4,257	7,785
Clare	0	2,865	988	22,998	0	26,193	2,665	11,940	11,893	4,028
Clinton	0	0	3,933	37,292	0	39,785	4,538	671	0	2,352
Crawford	0	0	695	11,535	0	24,986	3,261	1,878	17,370	22,010
Delta	1,059	3,192	46,174	51,186	0	95,325	11,376	6,800	9,984	10,795
Dickinson	2,423	7,674	7,301	29,413	0	24,025	14,487	4,239	10,786	9,766
Eaton	0	3,508	16,205	48,946	0	110,934	14,989	14,598	21,979	22,858
Emmet	4,294	0	2,666	45,831	0	45,267	10,053	36,199	28,664	48,094
Genesee	15,781	74,195	102,276	378,359	9,548	1,000,134	309,771	150,790	34,642	48,965
Gladwin	0	0	1,704	12,831	0	23,828	1,664	1,883	2,446	1,686
Gogebic	0	544	2,013	23,631	0	20,234	8,375	12,045	38,925	30,837
Grand Traverse	5,932	14,809	17,905	61,252	0	247,658	39,928	44,786	76,060	91,792
Gratiot	0	2,099	49,960	21,938	0	39,453	18,853	2,554	587	6,579
Hillsdale	0	3,908	2,818	20,296	0	82,156	11,126	2,009	1,015	1,436
Houghton	86	2,039	677	46,225	0	24,506	2,949	7,203	13,057	9,537
Huron	25	2,127	2,595	29,982	0	53,186	11,253	11,121	9,340	2,850
Ingham	0	55,652	112,919	333,579	8,292	606,555	239,275	40,513	31,037	29,906
Ionia	0	2,223	1,720	67,933	0	43,515	25,808	2,717	17,684	2,504
Iosco	59	0	3,950	33,757	641	39,155	7,794	3,663	3,355	7,127
Iron	24	1,553	3,833	14,643	0	23,441	2,029	4,716	1,633	2,411
Isabella	0	4,420	13,529	49,596	0	116,401	38,409	16,973	13,914	21,350
Jackson	3,205	19,034	4,697	115,924	0	357,535	120,580	17,436	16,920	34,731
Kalamazoo	8,707	109,589	62,967	161,944	0	389,959	328,553	51,016	39,530	36,922
Kalkaska	331	0	250	6,693	3,002	28,833	0	1,054	3,245	2,807
Kent	6,130	71,044	507,481	371,252	0	1,315,540	205,175	129,354	167,116	165,922
Keweenaw	0	0	0	1,650	0	1,337	0	2,406	2,586	484
Lake	0	0	0	16,725	0	4,706	1,676	1,190	773	2,131
Lapeer	4,953	2,032	5,911	37,559	2,967	102,650	18,565	2,344	737	1,600

Leelanau	315	0	45	11,137	0	19,502	771	516	21,363	17,094
Lenawee	0	8,473	7,537	69,632	0	150,087	26,702	10,653	9,342	4,343
Livingston	3,516	2,507	5,683	37,316	0	96,002	80,928	17,936	9,076	338
Luce	0	0	0	3,414	0	6,200	1,845	423	877	589
Mackinac	734	0	60	7,267	0	13,142	6,494	2,215	2,422	18,878
Macomb	337,026	132,002	38,242	663,274	6,448	1,883,799	316,814	116,684	41,825	89,333
Manistee	2,108	3,248	2,308	29,141	0	25,466	9,722	1,931	7,883	10,839
Marquette	2,941	743	11,490	58,604	0	123,150	69,899	21,181	19,528	22,361
Mason	0	4,480	1,490	24,374	0	42,824	14,640	4,812	1,329	4,109
Mecosta	2,045	4,384	281	37,544	0	33,636	14,305	13,446	4,366	9,342
Menominee	0	0	1,964	29,595	0	33,755	14,164	805	730	196
Midland	5,083	33,385	17,740	38,852	0	129,355	4,747	22,674	22,173	30,011
Missaukee	288	0	386	6,782	0	5,682	1,569	260	2	822
Monroe	18,692	6,502	6,283	88,522	0	85,820	17,695	31,640	21,286	24,577
Montcalm	1,437	0	5,659	32,478	1,224	53,474	5,926	16,210	1,372	213
Montmorency	1,933	223	0	8,724	0	9,685	2,007	484	1,164	2,140
Muskegon	22,888	22,100	8,240	106,765	0	245,936	104,602	42,257	2,268	6,453
Newaygo	954	8,626	9,603	19,497	0	40,462	3,689	5,125	3,566	405
Oakland	13,780	479,647	442,743	926,274	74,051	3,321,644	939,061	558,470	310,061	379,451
Oceana	0	0	0	15,896	0	16,596	1,716	2,325	343	768
Ogemaw	0	976	3,914	12,033	0	51,961	2,985	1,200	4,496	725
Ontonagon	0	1,415	0	11,539	0	9,348	1,212	1,506	3,019	12,348
Osceola	0	0	969	10,868	0	14,466	6,788	1,094	1,178	614
Oscoda	0	0	0	5,402	0	10,365	439	342	2,254	1,121
Otsego	0	1,180	2,643	12,257	0	46,073	1,747	2,288	19,722	25,877
Ottawa	13,986	32,356	16,253	74,228	0	203,095	77,642	47,320	43,962	20,728
Presque Isle	0	1,229	361	17,491	0	8,947	4,651	444	1,234	544
Roscommon	101	1,490	1,967	25,971	0	27,683	12,812	854	21,777	15,992
Saginaw	2,330	56,763	129,866	195,018	6,753	450,402	34,337	44,253	35,162	39,536
St. Clair	1,459	13,802	114,835	98,823	3,451	222,527	43,332	16,433	22,695	20,764
St. Joseph	1,252	3,940	8,094	73,628	970	144,030	33,014	7,264	10,822	8,835
Sanilac	2,414	198	3,350	31,396	0	27,096	8,981	640	7,229	1,853
Schoolcraft	0	0	258	10,303	0	6,193	0	255	4,005	6,116
Shiawassee	0	4,799	5,047	44,589	0	93,107	21,853	23,206	36	4,414
Tuscola	0	1,662	5,029	44,547	0	49,878	3,101	11,195	1,399	1,436
Van Buren	1,858	2,700	1,496	50,894	0	54,379	8,369	7,272	3,538	2,262
Washtenaw	3,840	54,501	52,556	173,476	34,839	518,959	154,887	43,652	32,698	59,353
Wayne	89,720	327,832	905,050	1,687,149	0	4,574,525	1,016,980	262,451	317,954	445,171
Wexford	0	7,407	11,055	26,200	0	49,413	5,362	5,937	17,244	13,565
Out of state	0	285,794	1,862,422	35,683	35,332	3,987,158	1,749,143	118,556	448,596	650,863
Total	\$627,168	\$1,940,045	\$4,760,504	\$7,560,129	\$187,749	\$23,359,324	\$6,697,991	\$2,205,157	\$2,238,085	\$2,748,610

CAUTION: See discussion of data limitations in text.

NOTE: Details may not add to totals due to rounding of cents figures.

SOURCE: Michigan Department of Treasury, Systems Division.

Table 20-8. Sales and use tax collections by Michigan county by Business Classification Code, Second Quarter, 1984.

County	Watercraft Sales/ Service (BCC 557)	Men's/ Boy's Clothing (BCC 561)	Women's Clothing (BCC 562)	Taverns and Clubs (BCC 581, 582, 583)	Hotel Dining Rooms (BCC 584)	Family Rest- aurants (BCC 585)	Fast Food Rest- aurants (BCC 586)	Sport- ing Goods (BCC 595)	Hotel/ Motel Sales Tax (BCC 701)	Hotel/ Motel Use Tax (BCC 701)
Alcona	\$ 1,013	\$ 0	\$ 0	\$ 17,168	\$ 0	\$ 10,962	\$ 2,541	\$ 2,524	\$ 2,795	\$ 1,390
Alger	0	0	0	20,523	0	5,711	407	242	3,731	11,528
Allegan	47,076	7,113	7,279	79,494	0	128,327	24,248	4,932	19,605	24,513
Alpena	400	2,928	8,247	32,111	0	95,639	30,822	19,897	7,843	9,352
Antrim	26,341	166	0	21,887	0	37,446	2,561	5,475	15,012	20,452
Arenac	16,382	1,440	0	22,040	0	21,132	20,261	5,219	6,068	7,016
Baraga	0	0	1,038	6,649	0	10,001	3,484	1,192	1,409	1,821
Barry	988	1,584	1,421	20,926	0	55,303	5,157	11,241	409	1,113
Bay	22,256	1,170	52,383	108,337	0	250,643	91,803	97,478	3,693	26,205
Benzie	2,230	1,961	2,864	9,202	0	39,008	893	5,009	2,455	5,664
Berrien	30,638	32,721	26,156	188,739	0	251,322	192,301	53,297	29,949	51,582
Branch	10,563	4,333	5,763	26,905	0	69,925	15,147	14,909	2,201	6,112
Calhoun	9,059	3,547	7,477	97,899	0	737,266	135,537	24,917	16,602	35,859
Cass	21,338	1,184	4,052	55,766	0	20,396	19,115	2,830	210	2,058
Charlevoix	12,986	0	4,598	22,092	0	41,328	10,997	3,572	24,771	20,539
Cheboygan	1,437	1,589	1,214	22,310	2,961	31,806	16,987	6,080	5,131	9,673
Chippewa	763	2,729	569	36,601	429	96,462	20,071	11,634	8,354	18,816
Clare	337	3,467	1,215	25,441	0	33,997	7,053	14,121	12,853	7,804
Clinton	0	0	3,938	36,462	0	50,050	5,702	2,561	2	2,854
Crawford	350	0	1,208	16,655	0	31,888	4,300	3,882	20,920	25,895
Delta	2,537	3,741	57,161	53,159	0	118,149	16,386	12,443	14,634	18,515
Dickinson	7,084	9,323	9,460	34,429	0	22,468	23,245	5,022	11,625	11,457
Eaton	514	4,329	20,962	48,775	0	136,240	15,979	40,018	26,243	21,669
Emmet	28,300	1	10,528	56,046	0	77,640	22,057	21,763	19,180	54,380
Genesee	53,534	87,544	107,288	368,749	3,205	1,100,923	380,106	306,182	45,156	64,459
Gladwin	0	0	3,010	14,806	0	38,500	2,875	3,887	2,427	1,918
Gogebic	0	0	2,960	20,487	0	17,519	12,283	3,105	8,269	12,386
Grand Traverse	19,007	16,996	20,624	66,214	0	314,136	51,785	78,610	113,162	167,671
Gratiot	0	2,933	58,146	22,738	0	41,821	24,331	4,750	1,023	8,542
Hillsdale	1,279	3,267	2,534	20,684	0	97,707	15,239	5,758	1	3,836
Houghton	31	2,213	891	45,430	0	29,408	4,774	10,692	15,678	15,097
Huron	14,189	3,216	4,471	30,678	0	71,908	21,740	18,608	12,592	8,404
Ingham	2,264	64,475	106,190	327,329	7,344	623,004	286,752	60,538	35,269	34,440
Ionia	0	2,347	2,289	36,520	0	50,988	37,402	5,600	20,825	4,922
Iosco	1,170	0	5,228	29,100	673	61,861	14,988	7,980	4,074	15,313
Iron	240	1,950	5,147	14,548	0	29,200	3,389	1,786	2,327	4,240
Isabella	0	6,092	12,965	51,049	0	148,433	41,616	16,972	20,702	25,460
Jackson	1,404	22,916	5,057	126,657	0	414,454	156,429	38,955	19,715	45,973
Kalamazoo	35,656	114,860	69,307	163,938	0	437,068	405,917	85,498	66,909	67,079
Kalkaska	3,963	0	0	9,328	4,268	36,229	0	2,362	3,067	3,761
Kent	22,518	88,331	597,383	352,838	0	1,473,056	270,911	266,865	181,302	222,873
Keweenaw	0	0	0	2,021	0	3,703	81	1,896	2,443	1,248
Lake	0	0	0	20,751	0	7,965	5,800	3,264	2,519	2,486
Lapeer	13,237	2,683	6,743	38,152	3,010	130,205	29,781	4,258	938	2,201

Leelanau	79	0	0	16,443	2,854	34,184	4,806	2,298	14,567	20,513
Lenawee	0	7,622	7,007	71,912	0	165,285	41,254	27,876	12,378	7,199
Livingston	38,452	3,615	7,632	42,405	0	111,008	112,609	31,382	10,271	551
Luce	288	0	0	3,531	0	9,107	2,592	1,329	1,574	2,974
Mackinac	1,769	219	170	22,605	0	49,210	12,548	13,055	48,101	55,600
Macomb	725,615	224,840	62,372	724,762	6,726	2,038,279	395,051	243,501	49,584	103,893
Manistee	8,038	4,474	2,770	36,740	0	33,788	13,706	4,352	12,548	15,392
Marquette	9,108	1,212	12,958	58,123	0	113,582	87,289	28,018	27,679	19,349
Mason	678	7,574	2,511	27,277	0	71,908	23,713	10,320	2,820	12,313
Mecosta	7,413	4,262	781	35,961	0	36,022	20,320	16,911	7,692	8,572
Menominee	0	0	2,676	32,512	0	43,674	15,062	2,239	1,029	405
Midland	12,836	34,076	17,324	42,188	0	131,271	5,150	33,028	22,586	35,707
Missaukee	616	0	474	10,641	0	7,540	3,166	1,188	89	1,309
Monroe	88,816	8,446	5,620	95,315	0	106,130	29,956	28,200	23,266	30,059
Montcalm	3,351	0	6,992	35,747	1,343	72,303	10,699	33,374	949	923
Montmorency	4,315	495	0	10,157	0	15,757	5,867	2,033	1,549	4,013
Muskegon	47,176	25,045	7,318	109,797	0	286,558	140,296	84,161	3,921	13,151
Newaygo	10,251	9,927	10,303	24,762	0	53,475	6,905	8,873	1,909	993
Oakland	97,156	571,847	504,390	964,263	66,774	3,556,106	1,195,822	700,764	345,308	477,132
Oceana	211	0	0	23,986	0	26,648	6,494	5,922	1,370	2,422
Ogemaw	0	1,475	6,059	10,250	0	62,192	7,355	1,803	4,469	2,741
Ontonagon	0	2,049	0	13,533	0	11,273	2,680	1,958	2,903	12,035
Osceola	0	0	1,292	13,567	0	18,882	9,728	782	1,638	538
Oscoda	0	0	0	5,940	0	15,039	3,416	911	3,628	1,873
Otsego	0	1,473	4,423	12,762	0	53,829	3,145	4,885	21,051	30,650
Ottawa	99,772	29,885	19,652	80,702	0	245,891	102,086	84,657	74,556	46,011
Presque Isle	0	1,572	363	16,828	0	13,685	7,159	1,021	2,464	1,191
Roscommon	9,131	2,930	3,844	29,795	0	42,709	21,724	3,564	25,808	20,889
Saginaw	13,954	63,556	151,886	198,292	6,725	554,608	45,020	46,580	40,098	51,635
St. Clair	7,056	15,023	139,175	117,011	3,281	286,447	55,006	35,427	37,135	31,008
St. Joseph	7,947	4,473	10,480	87,485	2,314	179,238	45,396	14,310	11,268	12,592
Sanilac	5,948	330	5,557	35,442	0	36,360	12,210	3,663	8,521	3,845
Schoolcraft	0	0	272	10,189	0	14,431	0	945	5,715	13,186
Shiawassee	0	4,652	6,341	43,962	0	109,091	28,515	34,272	24	5,493
Tuscola	1	2,381	7,017	45,719	0	58,647	5,308	18,596	1,475	1,537
Van Buren	8,775	3,133	2,098	58,755	1,543	88,917	26,214	15,643	11,639	6,157
Washtenaw	11,515	53,586	64,923	158,648	40,282	535,048	198,274	88,939	42,031	85,660
Wayne	449,438	512,812	1,302,111	1,715,268	0	5,097,332	1,239,784	445,207	368,948	557,875
Wexford	1,085	9,385	10,701	28,510	0	64,788	7,611	5,969	9,311	12,250
Out of state	0	332,243	2,517,213	15,224	30,825	3,897,528	2,134,812	170,676	546,178	742,559
Total	\$2,081,874	\$2,447,761	\$6,142,471	\$7,908,642	\$184,557	\$25,848,967	\$8,542,001	\$3,556,456	\$2,622,143	\$3,560,771

CAUTION: See discussion of data limitations in text.

NOTE: Details may not add to totals due to rounding of cents figures.

SOURCE: Michigan Department of Treasury, Systems Division.

Table 20-9. Sales and use tax collections by Michigan county by Business Classification Code, Third Quarter 1984.

County	Watercraft Sales/ Service (BCC 557)	Men's/ Boy's Clothing (BCC 561)	Women's Clothing (BCC 562)	Taverns and Clubs (BCC 581, 582, & 583)	Hotel Dining Rooms (BCC 584)	Family Rest- aurants (BCC 585)	Fast Food Rest- aurants (BCC 586)	Sport- ing Goods (BCC 595)	Hotel/ Motel Sales Tax (BCC 701)	Hotel/ Motel Use Tax (BCC 701)
Alcona	\$ 870	\$ 0	\$ 184	\$ 27,186	\$ 0	\$ 17,605	\$ 4,405	\$ 5,635	\$ 4,575	\$ 10,903
Alger	0	0	0	31,213	0	13,934	454	312	11,805	30,780
Allegan	33,983	10,622	10,136	102,863	0	149,707	27,131	5,283	23,512	49,395
Alpena	569	3,299	9,531	31,836	0	109,095	39,319	15,713	8,724	23,780
Antrim	23,666	0	466	33,027	0	57,345	3,534	9,606	41,631	46,868
Arenac	10,607	1,634	0	26,326	0	27,544	28,515	8,984	12,681	16,362
Baraga	0	0	1,151	7,351	0	13,435	4,088	785	2,388	2,952
Benzie	1,174	1,680	2,013	24,806	0	55,233	5,591	19,725	1,922	2,108
Bay	16,738	914	51,138	108,938	0	273,364	97,508	65,960	3,728	20,392
Benzie	7,740	2,634	5,829	13,658	0	80,390	1,736	11,072	7,735	22,326
Berrien	24,483	32,109	27,960	215,203	0	272,835	218,382	56,165	39,467	68,859
Branch	10,220	4,595	5,241	27,600	0	74,958	14,697	16,447	3,395	9,124
Calhoun	5,543	4,056	8,298	104,008	0	776,996	131,715	23,841	18,470	38,072
Cass	9,052	1,723	5,586	56,229	0	22,363	21,651	3,604	254	4,714
Charlevoix	15,998	0	11,600	37,302	0	86,442	20,747	5,381	63,343	63,810
Cheboygan	2,986	2,604	2,061	27,136	9,071	48,883	23,464	11,008	10,558	31,017
Chippewa	79	2,663	581	47,007	818	139,654	23,019	12,928	19,962	56,487
Clare	634	3,677	2,063	28,265	0	40,158	8,431	19,770	16,278	10,901
Clinton	0	0	4,616	36,204	0	52,610	5,796	1,982	0	2,709
Crawford	682	0	1,581	23,173	0	48,305	6,138	4,110	25,032	42,313
Delta	1,522	5,282	67,038	57,530	0	142,996	18,982	10,863	15,354	32,361
Dickinson	3,136	9,110	8,827	35,643	0	25,865	30,743	3,485	12,285	18,656
Eaton	594	4,986	16,256	48,679	0	137,124	14,337	42,720	21,464	19,102
Emmet	32,518	797	40,361	107,784	0	201,676	39,879	43,715	52,521	216,668
Genesee	32,367	71,705	115,477	356,517	0	113,329	379,495	257,664	65,758	78,046
Gladwin	3,333	0	2,795	18,034	0	52,656	3,675	6,817	3,206	2,649
Gogebic	0	0	3,209	23,806	0	23,962	12,271	1,852	10,654	26,095
Grand Traverse	18,179	32,363	27,139	95,228	0	445,473	63,089	85,615	135,343	348,561
Gratiot	0	2,256	60,485	23,831	0	43,258	24,612	6,640	511	11,316
Hillsdale	1,522	4,858	2,442	22,604	0	101,450	17,617	5,496	1,010	4,085
Houghton	95	2,516	921	46,667	0	39,249	6,402	11,351	23,582	30,330
Huron	16,895	3,307	4,469	33,218	0	95,998	24,071	7,966	22,555	17,451
Ingham	2,140	58,893	109,560	329,056	6,833	659,065	268,869	49,402	39,496	33,833
Ionia	0	2,266	2,464	40,573	0	50,615	36,586	4,139	13,182	5,145
Iosco	3,444	0	7,180	35,873	601	91,828	19,064	13,885	7,562	41,279
Iron	69	2,160	6,143	15,041	0	35,793	3,883	1,627	2,687	7,708
Isabella	0	6,108	13,915	49,152	0	168,291	45,989	17,254	23,873	29,613
Jackson	2,380	20,435	5,725	123,232	0	421,474	159,213	27,470	19,344	54,422
Kalamazoo	20,864	142,833	64,006	155,087	0	429,797	438,089	68,563	33,526	66,320
Kalkaska	5,275	0	0	11,085	4,561	51,348	0	3,163	4,108	7,764
Kent	27,547	85,589	563,508	347,589	0	460,397	291,884	192,558	174,140	228,530
Keweenaw	0	0	0	2,239	0	10,181	165	1,944	8,842	8,988
Lake	0	0	0	25,642	0	10,174	6,939	4,205	4,684	5,695
Lapeer	7,804	2,989	7,662	39,263	3,008	140,686	32,091	3,783	659	2,700

Leelanau	286	0	53	30,793	10,797	70,913	11,245	5,613	52,008	122,427
Lenawee	0	7,839	10,099	72,910	0	175,737	43,249	24,869	16,704	8,504
Livingston	11,908	2,643	6,412	44,914	0	117,064	118,949	25,237	12,126	1,307
Luce	1,580	0	0	5,119	0	14,467	4,127	2,831	3,581	7,656
Mackinac	2,871	1,404	231	54,973	0	130,070	28,590	13,267	365,927	169,596
Macomb	389,314	196,715	68,320	717,149	6,150	108,152	401,803	197,390	67,153	N.A.
Manistee	6,987	5,021	2,651	43,262	0	49,807	25,979	7,672	22,972	46,307
Marquette	8,320	1,044	14,502	67,925	0	175,219	105,825	26,247	31,775	37,169
Mason	736	9,371	3,902	31,494	0	120,444	31,151	19,589	7,583	44,289
Mecosta	5,416	6,494	1,303	41,500	0	38,504	25,912	21,974	9,484	10,233
Menominee	0	0	2,481	33,765	0	42,197	17,118	2,071	1,115	3,585
Midland	7,601	35,143	19,866	38,648	0	118,664	5,149	30,957	20,142	36,908
Missaukee	970	0	441	13,261	0	9,532	4,526	1,256	8	4,220
Monroe	30,344	6,914	6,322	97,884	0	101,578	31,020	28,832	22,273	30,822
Montcalm	3,009	119	10,152	37,222	1,418	73,951	10,716	7,960	4,320	700
Montmorency	3,509	695	0	13,988	0	25,580	9,102	5,593	2,342	7,607
Muskegon	27,010	24,994	7,988	110,340	0	289,103	156,333	81,349	10,669	22,339
Newaygo	8,604	12,072	7,045	27,431	0	61,963	7,021	11,197	3,144	2,180
Oakland	51,663	476,159	498,541	978,499	75,378	600,111	1,269,665	669,159	328,403	527,869
Oceana	742	0	0	28,626	0	37,171	12,538	12,330	4,862	6,733
Ogemaw	0	1,323	5,989	13,274	0	69,482	9,569	1,727	4,333	8,613
Ontonagon	0	2,108	0	17,977	0	16,751	3,797	2,234	5,889	24,584
Osceola	0	0	1,761	14,415	0	21,959	10,436	789	1,666	867
Oscoda	0	0	0	5,129	0	17,499	5,217	974	5,178	2,905
Otsego	0	1,954	5,867	14,518	0	80,819	4,318	7,370	32,566	67,681
Ottawa	89,209	37,929	17,160	92,587	0	275,407	113,479	64,457	96,311	62,943
Presque Isle	0	1,577	546	20,136	0	17,652	8,870	1,210	5,393	3,890
Roscommon	8,256	4,054	5,256	40,972	0	70,941	34,687	5,667	42,046	60,540
Saginaw	6,970	52,692	151,204	195,293	6,414	609,267	42,668	53,811	41,497	53,923
St. Clair	14,649	11,011	139,799	123,327	2,995	310,011	62,039	32,400	45,576	40,912
St. Joseph	7,592	5,095	9,843	95,272	1,091	184,055	48,146	12,904	13,380	14,749
Sanilac	5,587	279	6,271	39,241	0	44,831	14,279	4,268	10,134	8,411
Schoolcraft	0	0	421	12,086	0	25,269	178	983	12,183	33,257
Shiawassee	0	3,590	5,191	44,395	0	108,639	29,459	30,537	12	6,750
Tuscola	8,000	2,107	16,205	45,604	0	63,283	5,412	19,549	917	2,064
Van Buren	8,874	4,462	1,789	71,893	3,113	95,774	29,997	12,287	31,062	20,740
Washtenaw	21,535	60,584	73,910	155,070	36,791	553,458	225,080	85,407	42,143	106,748
Wayne	178,725	435,981	903,287	1,629,692	1,806	4,996,746	1,343,914	384,100	325,222	586,788
Wexford	738	10,935	14,739	35,180	0	80,756	8,222	8,656	12,707	20,855
Out of state	48	327,975	2,382,595	13,628	25,677	4,350,411	2,236,511	191,613	667,598	836,715
Total	\$1,255,761	\$2,280,946	\$5,681,759	\$8,222,096	\$196,522	\$27,666,778	\$9,180,562	\$3,286,824	\$3,394,210	N.A.

CAUTION: See discussion of data limitations in text.

NOTE: Details may not add to totals due to rounding of cents figures.

SOURCE: Michigan Department of Treasury, Systems Division.

Table 20-10. Sales and use tax collections by Michigan county by Business Classification Code, Fourth Quarter, 1984.

County	Watercraft Sales/ Service (BCC 557)	Men's/ Boy's Clothing (BCC 561)	Women's Clothing (BCC 562)	Taverns and Clubs (BCC 581, 582, & 583)	Hotel Dining Rooms (BCC 584)	Family Rest- aurants (BCC 585)	Fast Food Rest- aurants (BCC 586)	Sport- ing Goods (BCC 595)	Hotel/ Motel Sales Tax (BCC 701)	Hotel/ Motel Use Tax (BCC 701)
Alcona	\$ 42	\$ 0	\$ 108	\$ 18,623	\$ 0	\$ 10,776	\$ 1,180	\$ 2,247	\$ 3,105	\$ 1,788
Alger	0	0	0	20,089	0	4,521	0	473	1,945	10,431
Allegan	3,732	9,130	7,027	60,030	0	109,727	17,216	3,288	15,414	13,167
Alpena	149	5,825	12,078	33,364	0	80,352	35,213	18,426	6,137	8,240
Antrim	6,202	0	882	18,653	0	26,696	2,930	4,884	11,174	11,855
Arenac	3,301	2,033	0	19,963	0	14,000	18,889	4,656	7,655	3,268
Baraga	0	0	1,558	5,496	0	7,582	1,798	1,634	814	1,712
Barry	515	3,068	2,348	20,029	0	53,136	1,220	23,299	59	1,384
Bay	5,767	1,599	70,198	95,182	0	264,979	91,148	48,962	3,481	9,186
Benzie	1,342	2,216	3,231	7,478	0	30,665	368	2,205	2,622	4,825
Berrien	8,936	49,923	29,219	172,409	0	220,732	185,441	38,506	31,843	34,772
Branch	2,015	6,422	7,061	23,571	0	65,430	7,467	8,631	645	7,695
Calhoun	1,554	5,979	11,851	99,499	0	1,099,010	117,165	20,437	13,661	23,530
Cass	3,215	2,478	3,400	40,095	0	15,208	7,326	966	240	649
Charlevoix	1,890	0	5,290	17,291	0	35,050	3,664	2,075	41,297	24,038
Cheboygan	62	3,166	1,204	17,822	782	26,842	14,753	2,980	4,520	5,399
Chippewa	0	4,305	277	34,533	181	79,787	13,779	11,784	6,289	13,781
Clare	0	5,032	2,782	27,114	0	29,483	3,202	28,691	13,585	5,359
Clinton	0	0	5,035	35,515	0	44,027	3,880	573	322	2,297
Crawford	25	0	721	15,396	0	31,757	2,033	2,626	17,668	22,034
Delta	1,216	12,149	76,336	57,802	0	110,416	14,819	11,004	9,413	12,632
Dickinson	2,715	13,784	12,596	34,479	0	24,346	82,970	6,747	8,953	13,922
Eaton	23	11,954	21,175	52,118	0	126,759	17,134	26,669	31,820	28,170
Emmet	11,715	811	8,428	52,325	0	59,747	9,936	42,810	16,386	35,637
Genesee	5,999	124,126	155,495	363,353	0	1,090,951	345,477	230,971	51,474	61,589
Gladwin	613	0	2,720	15,079	0	40,743	1,057	2,630	1,207	1,368
Gogebic	0	522	8,843	20,873	0	24,504	2,381	8,594	13,929	12,611
Grand Traverse	7,019	27,176	21,008	64,582	0	292,191	46,144	69,658	74,114	122,470
Gratiot	0	4,854	74,755	22,297	0	44,781	20,991	3,245	907	7,429
Hillsdale	378	4,823	2,377	23,151	0	81,750	14,234	3,713	0	4,120
Houghton	57	2,110	1,473	43,318	0	26,209	2,930	14,616	14,246	15,817
Huron	8,578	4,627	5,901	35,277	0	63,896	18,021	4,269	11,616	4,361
Ingham	310	95,631	135,407	350,517	7,180	621,119	273,797	40,955	34,480	31,569
Ionia	0	3,388	2,745	31,420	0	43,340	27,104	3,580	6,253	3,220
Iosco	86	0	6,154	25,622	0	54,856	9,480	6,012	3,413	16,387
Iron	2	3,343	7,765	15,401	0	28,765	2,405	3,293	2,561	2,914
Isabella	0	9,214	16,726	55,723	0	144,662	45,247	17,711	21,178	19,481
Jackson	814	34,206	6,527	111,038	0	420,829	143,202	24,222	17,744	38,624
Kalamazoo	22,695	185,025	70,913	162,411	0	416,439	397,617	46,098	50,379	40,687
Kalkaska	2,048	0	140	7,717	7,678	36,960	0	3,418	3,950	3,458
Kent	3,726	140,549	897,363	378,018	0	1,497,624	268,051	153,290	233,658	185,597
Keweenaw	0	0	0	1,950	0	1,153	55	3,828	2,480	1,336
Lake	0	0	0	23,204	0	7,156	3,018	3,995	2,725	2,607
Lapeer	3,411	5,619	9,771	36,925	1,200	124,441	24,918	2,821	138	2,482

Leelanau	24	0	29	13,457	4,111	26,126	2,261	1,106	10,512	16,304
Lenawee	0	16,596	9,555	75,136	0	157,736	33,276	17,299	19,428	5,914
Livingston	1,709	6,498	4,683	41,653	0	104,002	98,915	27,536	13,555	1,442
Luce	0	0	0	3,711	0	7,606	2,573	2,372	1,342	1,482
Mackinac	1,060	45	33	12,523	0	33,231	12,151	4,166	63,867	20,755
Macomb	232,601	320,656	63,790	715,680	748	2,128,805	374,872	150,055	75,917	97,514
Manistee	3,278	6,135	2,335	31,549	0	32,553	10,637	4,825	8,240	15,864
Marquette	1,253	1,608	16,390	63,508	0	147,711	28,807	32,766	24,352	16,960
Mason	104	10,829	2,882	28,763	0	62,535	17,841	10,041	3,088	8,909
Mecosta	1,068	7,033	722	43,170	0	34,978	23,674	16,752	8,768	7,530
Menominee	0	0	3,253	35,293	0	37,606	14,908	503	1,226	2,529
Midland	1,446	54,274	19,517	38,433	0	123,220	4,649	29,088	25,058	27,568
Missaukee	96	0	478	9,480	0	7,430	2,000	755	3	10,023
Monroe	16,837	11,734	4,666	87,859	0	91,735	39,669	38,220	21,004	23,223
Montcalm	853	0	8,621	34,923	1,496	58,680	4,413	7,590	2,096	672
Montmorency	2,015	345	0	12,154	0	14,034	6,071	4,098	581	3,646
Muskegon	14,662	41,451	8,051	128,010	0	265,772	127,093	33,238	3,338	11,508
Newaygo	3,724	17,805	13,230	25,775	0	48,398	2,897	9,850	1,692	1,127
Oakland	11,356	873,706	622,639	976,026	101,145	3,799,144	1,159,973	1,085,267	333,276	532,477
Oceana	74	0	0	19,908	0	23,452	2,546	2,478	414	1,382
Ogemaw	0	2,017	6,172	9,568	0	57,329	4,913	1,772	2,519	3,918
Ontonagon	0	2,928	0	17,377	0	10,329	2,028	3,525	3,927	10,767
Osceola	0	0	1,403	14,455	0	19,365	7,015	2,264	1,449	688
Oscoda	0	0	0	5,689	0	12,022	2,035	3,264	4,092	2,111
Otsego	0	2,345	3,851	12,897	0	50,077	3,374	7,202	16,135	28,322
Ottawa	53,348	45,441	19,258	75,738	0	220,328	88,784	49,036	57,443	27,020
Presque Isle	0	2,606	707	20,284	0	12,912	4,222	525	3,834	1,197
Roscommon	986	3,864	3,634	28,975	0	35,230	21,789	1,616	25,822	15,928
Saginaw	2,753	100,837	204,487	201,479	6,552	596,296	25,158	67,528	40,286	37,905
St. Clair	11,385	23,001	185,475	104,098	3,723	251,687	56,681	25,770	33,234	29,115
St. Joseph	4,689	6,194	11,786	82,367	1,006	153,966	35,323	10,101	12,130	8,260
Sanilac	3,571	647	4,599	32,072	0	30,094	10,867	2,042	6,775	3,786
Schoolcraft	0	0	438	9,635	0	13,069	0	649	4,764	10,028
Shiawassee	0	7,772	7,662	47,777	0	94,451	27,710	26,198	24	6,335
Tuscola	17,155	4,643	5,641	46,548	0	55,076	3,685	12,241	889	1,691
Van Buren	4,666	3,831	1,246	50,632	534	74,893	13,339	8,411	3,411	1,548
Washtenaw	4,207	63,804	90,975	150,748	42,731	569,167	238,169	78,150	45,845	77,402
Wayne	70,652	697,687	1,339,492	1,713,454	0	4,996,804	1,228,666	375,213	358,673	502,859
Wexford	198	14,785	13,294	30,475	0	54,004	6,086	8,997	13,932	11,779
Out of state	0	555,308	3,196,434	12,044	48,180	4,476,848	2,073,593	279,714	610,208	796,995
Total	\$575,922	\$3,691,512	\$7,586,316	\$7,830,075	\$227,247	\$26,622,098	\$8,122,323	\$3,403,715	\$2,658,649	\$3,258,381

CAUTION: See discussion of data limitations in text.

NOTE: Details may not add to totals due to rounding of cents figures.

SOURCE: Michigan Department of Treasury, Systems Division.

Table 20-11. Sales and use tax collections by Michigan county by Business Classification Code, totals for 1984.

County	Watercraft Sales/ Service (BCC 557)	Men's/ Boy's Clothing (BCC 561)	Women's Clothing (BCC 562)	Taverns and Clubs (BCC 581, 582, & 583)	Hotel Dining Rooms (BCC 584)	Family Rest- aurants (BCC 585)	Fast Food Rest- aurants (BCC 586)	Sport- ing Goods (BCC 595)	Hotel/ Motel Sales Tax (BCC 701)	Hotel/ Motel Use Tax (BCC 701)
Alcona	\$ 1,925	\$ 0	\$ 292	\$ 73,138	\$ 0	\$ 44,065	\$ 8,730	\$ 11,229	\$ 11,790	\$ 14,779
Alger	0	0	0	89,253	0	27,079	1,049	1,288	18,518	60,897
Allegan	86,344	31,953	29,585	295,449	0	479,651	82,002	16,402	71,119	94,770
Alpena	1,118	14,594	36,644	126,124	0	363,673	129,112	68,089	29,069	47,628
Antrim	61,165	333	1,348	92,020	0	143,747	10,882	27,162	83,222	96,078
Arenac	33,477	6,574	0	86,051	0	74,518	80,161	21,455	31,009	28,746
Baraga	0	0	4,451	25,038	0	38,505	10,176	4,953	5,411	7,567
Barry	2,892	7,718	6,756	85,223	0	213,008	13,796	66,379	2,390	5,612
Bay	58,062	5,396	220,545	414,492	0	1,016,058	351,396	264,439	13,724	74,253
Benzie	11,423	8,240	13,808	35,319	0	182,924	2,997	19,838	14,535	34,972
Berrien	78,134	142,363	104,985	728,675	0	943,068	737,816	175,636	135,841	178,651
Branch	23,273	18,553	22,644	100,821	0	268,450	43,151	46,196	6,886	26,183
Calhoun	18,190	16,829	34,071	396,968	0	3,273,337	483,100	85,101	61,859	124,654
Cass	35,777	6,874	14,873	193,634	0	76,452	60,866	8,551	833	8,218
Charlevoix	32,236	0	23,849	88,796	0	189,595	40,165	13,112	208,210	151,312
Cheboygan	4,501	8,926	5,286	86,210	12,814	127,648	66,873	21,548	24,822	48,924
Chippewa	842	11,963	1,849	147,828	1,659	391,380	75,461	43,822	38,862	96,869
Clare	971	15,041	7,048	103,818	0	129,831	21,351	74,522	56,609	28,092
Clinton	0	0	17,522	145,473	0	186,472	19,916	5,787	324	10,212
Crawford	1,057	0	4,205	66,759	0	136,936	15,732	12,496	80,990	112,252
Delta	6,334	24,364	246,709	219,677	0	466,886	61,563	41,110	49,385	74,303
Dickinson	15,358	39,891	38,184	133,964	0	96,704	151,445	19,493	43,649	53,801
Eaton	1,131	24,777	74,598	198,518	0	511,057	62,439	124,005	101,506	91,799
Emmet	76,827	1,609	61,983	261,986	0	384,330	81,925	144,487	116,751	354,779
Genesee	107,681	357,570	480,536	1,466,978	12,753	4,305,337	1,414,849	945,607	197,030	253,059
Gladwin	3,946	0	10,229	60,750	0	155,727	9,271	15,217	9,286	7,621
Gogebic	0	1,066	17,025	88,797	0	86,219	35,310	25,596	71,777	81,929
Grand Travers	50,137	91,344	86,676	287,276	0	1,299,458	200,946	278,669	398,679	730,494
Gratiot	0	12,142	243,346	90,804	0	169,313	88,787	17,189	3,028	33,866
Hillsdale	3,179	16,856	10,171	86,735	0	363,063	58,216	16,976	2,026	13,477
Houghton	269	8,878	3,962	181,640	0	119,372	17,055	43,862	66,563	70,781
Huron	39,687	13,277	17,436	129,155	0	284,988	75,085	41,964	56,103	33,066
Ingham	4,714	274,651	464,076	1,340,481	29,649	2,509,743	1,068,693	191,408	140,282	129,748
Ionia	0	10,224	9,218	176,446	0	188,458	126,900	16,036	57,944	15,791
Iosco	4,759	0	22,512	124,354	1,915	247,700	51,326	31,540	18,404	80,106
Iron	335	9,006	22,888	59,633	0	117,199	11,706	11,422	9,208	17,273
Isabella	0	25,834	57,135	205,520	0	577,787	171,261	68,910	79,667	95,904
Jackson	7,803	96,591	22,006	476,851	0	1,614,292	579,424	108,083	73,723	173,750
Kalamazoo	87,922	552,307	267,193	643,380	0	1,673,263	1,570,176	251,175	190,344	211,008
Kalkaska	11,617	0	390	34,823	19,509	153,370	0	9,997	14,370	17,790
Kent	59,921	385,513	2,565,735	1,449,697	0	5,746,617	1,036,021	742,067	756,216	802,922
Keweenaw	0	0	0	7,860	0	16,374	301	10,074	16,351	12,056
Lake	0	0	0	86,322	0	30,001	17,433	12,654	10,701	12,919
Lapeer	29,405	13,323	30,087	151,899	10,185	497,982	105,355	13,206	2,472	8,983

Leelanau	704	0	127	71,830	17,762	150,725	19,083	9,533	98,450	176,338
Lenawee	0	40,530	34,198	289,590	0	648,845	144,481	80,697	57,852	25,960
Livingston	55,585	15,263	24,410	166,288	0	428,076	411,401	102,091	45,028	3,638
Luce	1,868	0	0	15,775	0	37,380	11,157	6,955	7,374	12,701
Mackinac	6,434	1,668	494	97,368	0	225,653	59,783	32,703	480,317	264,829
Macomb	1,684,556	874,213	232,724	2,820,865	20,072	8,159,035	1,488,540	707,630	234,479	N.A.
Manistee	20,411	18,878	10,064	140,692	0	141,614	60,044	18,780	51,643	88,402
Marquette	21,622	4,607	55,340	248,160	0	559,662	291,820	108,212	103,334	95,839
Mason	1,518	32,254	10,785	111,908	0	297,711	87,345	44,762	14,820	69,620
Mecosta	15,942	22,173	3,087	158,175	0	143,140	84,211	69,083	30,310	35,677
Menominee	0	0	10,374	131,165	0	157,232	61,252	5,618	4,100	6,715
Midland	26,966	156,878	74,447	158,121	0	502,510	19,695	115,747	89,959	130,194
Missaukee	1,970	0	1,779	40,164	0	30,184	11,261	3,459	102	16,374
Monroe	154,689	33,596	22,891	369,580	0	385,263	118,340	126,892	87,829	108,681
Montcalm	8,650	119	31,424	140,370	5,481	258,408	31,754	65,134	8,737	2,508
Montmorency	11,772	1,758	0	45,023	0	65,056	23,047	12,208	5,636	17,406
Muskegon	111,736	113,590	31,597	454,912	0	1,087,369	528,324	241,005	20,196	53,451
Newaygo	23,533	48,430	40,181	97,465	0	204,298	20,512	35,045	10,311	4,705
Oakland	173,955	2,401,359	2,068,313	3,845,062	317,348	14,277,005	4,564,521	3,013,660	1,317,048	1,916,929
Oceana	1,027	0	0	88,416	0	103,867	23,294	23,055	6,989	11,305
Ogemaw	0	5,791	22,134	45,125	0	240,964	24,822	6,502	15,817	15,997
Ontonagon	0	8,500	0	60,426	0	47,701	9,717	9,223	15,738	59,734
Osceola	0	0	5,425	53,305	0	74,672	33,967	4,929	5,931	2,707
Oscoda	0	0	0	22,160	0	54,925	11,107	5,491	15,152	8,010
Otsego	0	6,952	16,784	52,434	0	230,798	12,584	21,745	89,474	152,530
Ottawa	256,315	145,611	72,323	323,255	0	944,721	381,991	245,470	272,272	156,702
Presque Isle	0	6,984	1,977	74,739	0	53,196	24,902	3,200	12,925	6,822
Roscommon	18,474	12,338	14,701	125,713	0	176,563	91,012	11,701	115,453	113,349
Saginaw	26,007	273,848	637,443	790,082	26,444	2,210,573	147,183	212,172	157,043	182,999
St. Clair	34,549	62,837	579,284	443,259	13,450	1,070,672	217,058	110,030	138,640	121,799
St. Joseph	21,480	19,702	40,203	338,752	5,381	661,289	161,879	44,579	47,600	44,436
Sanilac	17,520	1,454	19,777	138,151	0	138,381	46,337	10,613	32,659	17,895
Schoolcraft	0	0	1,389	42,213	0	58,962	178	2,832	26,667	62,587
Shiawassee	0	20,813	24,241	180,723	0	405,288	107,537	114,213	96	22,992
Tuscola	25,156	10,793	33,892	182,418	0	226,884	17,506	61,581	4,680	6,728
Van Buren	24,173	14,126	6,629	232,174	5,190	313,963	77,919	43,613	49,650	30,707
Washtenaw	41,097	232,475	282,364	637,942	154,643	2,176,632	816,410	296,148	162,717	329,163
Wayne	788,535	1,974,312	4,449,940	6,745,563	1,806	19,665,407	4,829,344	1,466,971	1,370,797	2,092,693
Wexford	2,021	42,512	49,789	120,365	0	248,961	27,281	29,559	53,194	58,449
Out of state	48	1,501,320	9,958,664	76,579	140,014	16,711,945	8,194,059	760,559	2,272,580	3,027,132
Total	\$4,540,725	\$10,360,264	\$24,171,050	\$31,520,942	\$796,075	\$103,497,167	\$32,542,877	\$12,452,152	\$10,913,087	N.A.

CAUTION: See discussion of data limitations in text.

NOTE: Details may not add to totals due to rounding of cents figures.

SOURCE: Michigan Department of Treasury, Systems Division.

CHAPTER 21

MISCELLANEOUS TABLES

Daniel M. Spotts

This chapter presents a variety of tables on subjects not related to topics covered in earlier chapters. Highlights of each table are discussed below.

Table 21-1 shows average gasoline prices in Michigan and surrounding states from 1979 through 1985. In Michigan average gasoline prices peaked at \$1.41 per gallon in 1981 and then declined steadily through 1985. Average gasoline prices have been similar in the Great Lakes states, although they have been slightly lower in Ohio. In Michigan average gasoline prices have been slightly higher than the national average.

Table 21-3 documents selected characteristics of that portion of Michigan's gasoline service station industry (SIC 554) which pays Social Security (FICA) taxes. In 1983 this portion of the industry consisted of 4,230 establishments, employed 20,277 persons, and disbursed an annual payroll of \$172.7 million. The number of establishments in this portion of the industry declined dramatically from 1974 through 1982. During each of the years 1974-1983 over half of the firms in this portion of the industry employed less than five persons.

Tables 21-4 and 21-5 summarize the characteristics of domestic travel in Michigan as revealed in a special study conducted for the Michigan Travel Bureau by the U.S. Travel Data Center. The study involved singling out for analysis those respondents in the Center's monthly National Travel Survey that had recently traveled in Michigan. The National Travel Survey is a monthly telephone survey conducted on samples of over 1,500 adults. To obtain sufficient cases for analysis, the Center pooled respondents that had traveled in Michigan from its 1983 and 1984 surveys.

Travel in Michigan was defined as any trip taken by a U.S. adult to a destination in Michigan, or any trip during which one or more nights were spent in Michigan. Since this definition does not include non-overnight, non-destination travel through Michigan, the statistics in Tables 21-4 and 21-5 should not be construed as representative of all travel in Michigan. It is perhaps most reasonable to consider these results to be generally representative of overnight travel in Michigan since only 7% of the trips upon which the results are based were day trips. A further limitation is the relatively small sample size. Despite the above difficulties, these findings provide at least a general profile of the character of travel and travelers in Michigan, and are the only current statistics of this kind available at the present time.

Table 21-6 portrays the dramatic growth in the number of travel agency locations in Michigan, other Great Lakes states, and the U.S. as a whole. Table 21-6 also shows that travel agency locations in Illinois are far more numerous than in Michigan. In 1984 Michigan had only 72 locations per 1,000 residents, whereas Illinois had 122 locations per 1,000 residents.

Table 21-7 displays the characteristics of selected commercial attractions in Michigan as presented in the 1985 Funparks Directory. The table omits several important commercial attractions not listed in this directory, such as Pictured Rocks Boat Cruise and Toonerville Trolley.

Table 21-1. Average gasoline prices in Michigan and surrounding states, 1979-1985.

Date of AAA Survey	U.S.	MICHIGAN	ILLINOIS	INDIANA	MINNESOTA	OHIO	WISCONSIN
4/10/79	75.4	78.7	79.5	76.9	76.7	72.6	72.3
5/25/79	83.9	86.5	87.5	85.4	84.7	81.2	81.1
6/22/79	88.1	90.7	92.4	89.2	89.5	85.7	85.7
8/24/79	97.9	101.9	104.1	99.4	99.9	93.9	97.1
11/20/79	102.3	106.9	106.9	105.3	104.1	98.7	100.5
12/20/79	104.2	109.1	109.3	107.2	106.7	102.0	102.7
Average	92.0	95.6	96.6	93.9	93.6	89.0	89.9
4/25/80	124.9	129.3	130.2	126.7	124.7	117.8	120.9
5/23/80	124.7	129.3	129.6	127.1	125.8	119.4	122.8
7/01/80	125.3	129.7	129.0	126.6	125.5	122.4	122.6
8/29/80	125.3	129.0	128.5	125.9	123.6	120.4	121.9
11/25/80	123.6	126.8	126.3	124.4	123.7	119.8	120.3
12/19/80	124.6	127.1	127.5	125.5	124.3	120.3	121.3
Average	124.7	128.5	128.5	126.0	124.6	120.0	121.6
4/14/81	139.5	144.4	143.4	140.6	139.9	134.8	136.7
5/21/81	138.5	143.1	141.3	139.7	137.7	134.0	135.1
6/30/81	137.4	140.6	139.7	139.3	138.2	130.7	133.6
9/03/81	136.8	138.9	137.8	137.5	137.4	133.1	135.8
11/23/81	136.1	138.9	137.9	137.4	136.4	132.7	135.4
12/16/81	136.0	138.5	137.3	136.8	136.4	132.9	135.4
Average	137.4	140.7	139.6	138.5	138.0	133.0	135.3
4/06/82	124.6	126.5	125.0	125.8	125.8	121.3	124.5
5/25/82	123.3	126.6	124.1	127.2	125.3	121.6	123.9
6/29/82	131.4	136.7	134.7	136.1	136.1	130.5	134.0
8/31/82	131.8	136.3	134.5	134.9	135.4	129.1	134.0
11/23/82	130.2	133.3	132.3	132.3	133.5	128.2	130.7
12/21/82	128.6	131.3	130.6	129.7	133.4	126.3	129.2
Average	128.3	131.8	130.2	131.0	131.6	126.2	129.4
3/29/83	116.7	121.5	119.2	121.7	118.4	115.3	117.4
5/24/83	125.5	131.7	128.4	131.3	132.0	126.3	128.0
6/28/83	127.0	132.5	130.2	131.6	133.3	127.0	128.1
8/30/83	128.8	133.2	133.7	132.4	133.6	127.5	130.6
11/22/83	126.2	131.8	131.5	130.9	130.3	125.2	127.6
12/20/83	125.2	130.6	129.8	128.0	128.5	124.9	126.4
Average	124.9	130.2	128.8	129.3	129.3	124.4	126.3
4/17/84	123.9	130.2	128.7	128.9	129.2	122.6	126.0
5/22/84	124.9	131.6	130.2	130.3	130.7	123.2	126.5
6/26/84	124.6	131.3	129.3	128.9	129.5	122.9	126.2
8/28/84	122.5	127.6	126.7	125.6	128.4	120.6	123.5
11/20/84	122.8	128.9	127.8	127.1	127.0	121.4	124.8
12/18/84	122.2	128.0	127.2	124.9	125.9	120.0	123.9
Average	123.5	129.6	128.3	127.6	128.5	121.8	125.1
4/02/85	120.0	124.7	124.5	124.1	122.5	118.4	121.6
5/21/85	125.2	128.5	130.0	128.9	128.7	126.4	127.9
7/02/85	126.6	129.8	130.9	131.4	133.4	124.7	129.0
8/27/85	126.9	130.8	132.6	131.6	134.5	124.3	129.4
11/26/85	125.6	129.8	131.2	129.0	130.6	122.9	127.8
12/19/85	125.6	130.1	130.5	130.0	130.8	123.2	127.7
Average	125.0	128.9	129.9	129.2	130.1	123.3	127.2

NOTE: Prices are in cents per gallon. Average price shown for a given date is equal to (Full-Service Regular Price + Full-Service Unleaded Price + Self-Service Regular Price + Self-Service Unleaded Price)/4. Annual averages are based on the 6 surveys shown for a given year. Data are based on a sample of nearly 6,000 service stations on major travel routes throughout the continental United States.

SOURCE: American Automobile Association Fuel Gauge surveys.

Table 21-2. Average price of regular and unleaded gasoline in Michigan, 1979-1985.

Date of AAA Survey	FULL-SERVICE PRICES		SELF-SERVICE PRICES	
	Regular	Unleaded	Regular	Unleaded
4/10/79	78.1	82.0	74.4	80.3
5/25/79	85.5	89.9	82.7	87.7
6/22/79	89.3	93.7	87.5	92.3
8/24/79	100.6	104.9	98.6	103.4
11/20/79	106.0	110.5	102.9	108.2
12/20/79	108.0	112.5	105.4	110.4
Average	94.6	98.9	91.9	97.1
4/25/80	128.1	133.5	124.7	130.7
5/23/80	129.4	133.6	123.8	130.3
7/01/80	130.3	134.1	124.1	130.5
8/29/80	129.2	133.9	123.1	129.7
11/25/80	127.3	132.2	120.6	127.1
12/19/80	127.7	132.2	121.1	127.4
Average	128.7	133.3	122.9	129.3
4/14/81	145.1	150.1	137.9	144.6
5/21/81	144.0	149.2	136.1	143.0
6/30/81	141.3	147.1	133.5	140.4
9/03/81	140.1	145.6	131.4	138.4
11/23/81	140.1	145.7	131.4	138.4
12/16/81	139.7	145.4	131.1	137.9
Average	141.7	147.2	133.6	140.5
4/06/82	129.2	135.0	117.3	124.3
5/25/82	129.1	135.0	117.8	124.4
6/29/82	138.6	144.7	128.5	135.1
8/31/82	138.9	145.2	127.2	134.0
11/23/82	137.0	143.2	123.1	130.0
12/21/82	135.7	141.9	120.5	127.2
Average	134.7	140.8	122.4	129.2
3/29/83	126.8	133.2	109.7	116.3
5/24/83	135.6	141.1	131.9	128.3
6/28/83	136.0	142.2	122.6	129.2
8/30/83	136.7	143.0	123.1	129.8
11/22/83	136.1	142.4	121.0	127.8
12/20/83	135.3	141.6	119.3	126.3
Average	134.4	140.6	119.6	126.3
4/17/84	134.4	140.8	119.3	126.2
5/22/84	135.5	142.0	120.9	127.9
6/26/84	135.3	141.8	120.5	127.5
8/28/84	132.7	139.3	115.6	122.8
11/20/84	133.8	140.4	117.2	124.3
12/18/84	133.5	139.9	115.9	122.9
Average	134.2	140.7	118.2	125.3
4/02/85	129.7	136.5	112.7	119.7
5/21/85	132.6	139.7	1147.0	124.5
7/02/85	133.6	140.8	118.6	126.1
8/27/85	134.8	141.8	119.7	126.9
11/26/85	134.4	141.5	118.0	125.4
12/19/85	134.5	141.6	118.4	125.9
Average	133.3	140.3	117.4	124.7

NOTE: Prices are in cents per gallon. Annual averages are based on the 6 surveys shown for a given year. Data are based on a sample of service stations on major travel routes in Michigan.

SOURCE: American Automobile Association Fuel Gauge surveys.

Table 21-3. Selected characteristics of gasoline service stations in Michigan (SIC 554), 1974-1983.

Year	Number of employees for week including March 12	Annual Payroll (\$000)	Number of establishments	Percentage of establishments employing . . .								
				1-4 persons	5-9 persons	10-19 persons	20-49 persons	50-99 persons	100-249 persons	250-499 persons	500-999 persons	1000+ persons
1974	26,600	141,933	6,419	72.0	22.0	4.9	1.0	0.1	0.05	0.00	0.0	0.0
1975	27,681	145,625	6,064	66.3	26.9	5.3	1.2	0.1	0.02	0.00	0.0	0.0
1976	28,050	151,929	5,609	64.2	27.9	6.5	1.1	0.2	0.00	0.00	0.0	0.0
1977	28,818	163,956	5,434	60.5	30.0	7.7	1.6	0.2	0.04	0.00	0.0	0.0
1978	31,286	173,283	5,073	52.3	33.7	11.2	2.5	0.2	0.02	0.00	0.0	0.0
1979	29,385	173,122	4,755	51.3	33.9	12.3	2.4	0.1	0.06	0.00	0.0	0.0
1980	24,837	194,224	4,494	56.2	33.5	8.5	1.5	0.2	0.09	0.00	0.0	0.0
1981	22,670	175,704	4,171	56.8	33.9	7.7	1.5	0.1	0.05	0.00	0.0	0.0
1982	21,918	177,112	4,028	56.2	34.3	8.0	1.4	0.1	0.02	0.00	0.0	0.0
1983	20,277	172,669	4,230	57.5	34.0	7.2	1.2	0.2	0.02	0.00	0.0	0.0

NOTE: Prior to 1983, establishment counts were based on a determination of active status as of December 15 of a given year. Beginning with 1983, establishment counts were based on a determination of active status as of anytime during the year. All data in this table cover only establishments which pay Social Security (FICA) taxes.

SOURCE: U.S. Department of Commerce, Bureau of the Census. County Business Patterns: Michigan, annual, Table 18.

Table 21-4. Characteristics of domestic travel to and through Michigan, 1983-1984.

Characteristic	Trips	Person-trips
MAIN ACTIVITY OF TRIP		
Visit friends/relatives	38%	41%
Other pleasure	38	38
Business	10	6
Convention	4	3
Other	11	11
Total	100%	100%
VACATION TRIP		
Yes	66%	69%
No	34	31
Total	100%	100%
WEEKEND TRIP		
Yes	51%	54%
No	49	46
Total	100%	100%
ROUND TRIP DISTANCE (INCLUDING MILEAGE OUTSIDE MICHIGAN)		
200-299 miles	25%	26%
300-399 miles	20	24
400-599 miles	22	25
600-999 miles	21	17
1000-1999 miles	5	4
2000 miles or more	3	2
Outside contiguous U.S.	4	3
Total	100%	100%
Average	540 miles	510 miles
MODE OF TRANSPORTATION		
Auto/truck/RV	83%	89%
Airplane	10	7
Bus	6	4
Train	*	*
Other	*	*
Total	100%	100%
ORIGIN REGION		
New England (CT, ME, MA, NH, RI, VT)	*%	*%
Eastern Gateway (NJ, NY)	2	2
George Washington Country (DE, DC, MD, PA, VA, WV)	4	4
The South (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN)	6	4
Great Lakes Country (IL, IN, IA, MI, MN, OH, WI)	83	86
Mountain West (CO, MT, NE, ND, SD, UT, WY)	*	*
Frontier West (AZ, KS, MO, NM, OK, TX)	3	2
Far West (CA, ID, NV, OR, WA)	1	1
Total	100%	100%
AREA OF RESIDENCE		
Large Metropolitan Statistical Area	50%	48%
Small Metropolitan Statistical Area	40	42
Non-Metropolitan Statistical Area	10	10
Total	100%	100%
AREA OF DESTINATION		
Large Metropolitan Statistical Area	22%	23%
Small Metropolitan Statistical Area	28	25
Non-Metropolitan Statistical Area	46	50
Outside contiguous U.S.	4	3
Total	100%	100%

Table 21-4. Characteristics of domestic travel to and through Michigan, 1983-1984
(continued).

Continued

Characteristic	Trips	Person-trips
TYPE OF LODGING ¹		
Home of friends/relatives	43%	43%
Hotel/motel/motor hotel	30	28
Rented Cabin/condo/vacation home	2	2
Owned cabin/condo/vacation home	7	8
Camper/RV/tent	11	15
Other	2	1
No nights	7	8
TRIP DURATION		
No nights	7%	8%
One night	11	12
2-3 nights	47	47
4-9 nights	25	24
10 nights or more	10	9
Total	100%	100%
AVERAGE DURATION OF TRIPS INVOLVING 0 OR MORE NIGHTS		
All nights on trip, including those outside Michigan	4.7 nights	4.5 nights
Only nights spent in Michigan	4.1 nights	4.0 nights
AVERAGE DURATION OF TRIPS INVOLVING 1 OR MORE NIGHTS		
Nights at friends/relatives in Michigan or elsewhere	3.5 nights	4.2 nights
Nights at friends/relatives in Michigan	4.0 nights	3.6 nights
Nights in commercial lodging in Michigan or elsewhere	2.7 nights	2.8 nights
Nights in commercial lodging in Michigan	3.5 nights	3.9 nights
TRAVEL PARTY SIZE		
One	38%	19%
Two	38	37
Three	14	21
Four	6	12
Five or more	3	10
Total	100%	100%
Average	2.03 persons	
TRAVEL PARTY STRUCTURE		
One adult without children	38%	19%
Two or more adults, without children	40	42
One adult with children	7	10
Two or more adults, with children	15	28
Total	100%	100%
QUARTER OF YEAR		
January-March	12%	9%
April-June	25	30
July-September	40	39
October-December	24	21
Total	100%	100%
RENTED CAR AT ANY TIME ON TRIP		
Yes	2%	2%
No	98	98
Total	100%	100%

Table 21-4. Characteristics of domestic travel to and through Michigan, 1983-1984 (continued).

Characteristic	Trips -	Person-trips
PACKAGE TOUR		
Yes	5%	3%
No	<u>95</u>	<u>97</u>
Total	100%	100%
TRAVEL AGENT		
Consulted travel agent for hotel or trans. reservations	4%	3%
Consulted travel agent, but not for hotel or trans. res.	2	1
Did not consult a travel agent	<u>94</u>	<u>96</u>
Total	100%	100%

*Less than .5 percent.

¹Includes all accommodations on trip, including those used outside Michigan. Details add to greater than 100% due to multiple responses.

NOTE: "Travel to and through Michigan" is defined as any trip taken by a U.S. adult to a destination in Michigan, or any trip during which one or more nights were spent in Michigan. Since this definition does not include non-overnight, non-destination travel through Michigan, these estimates should not be construed as representative of all travel in Michigan. It is perhaps most reasonable to consider these estimates to be generally representative of overnight travel in Michigan since only 7% of the trips upon which these estimates are based were day trips. See discussion of study methodology in text. Details in this table may not add to 100% due to rounding. Base = 543 trips.

SOURCE: U.S. Travel Data Center. 1985. *Travel To and Through Michigan 1983-84*. Special study prepared for the Michigan Travel Bureau. Washington, D.C.: U.S. Travel Data Center. Reprinted with permission.

Table 21-5. Characteristics of U.S. travelers to and through Michigan, 1983-84.

Characteristic	N=282 Respondents
MARITAL STATUS	
Married	70%
Single, never married	20
Separated	1
Divorced	4
Widowed	5
Total	100%
EDUCATION	
Less than high school	8%
High school complete	28
College incomplete	22
College complete	25
Graduate work	17
Total	100%
GENDER	
Male	45%
Female	55
Total	100%
OCCUPATION OF RESPONDENT	
Professional/managerial, etc.	15%
Lower level technical/managerial	15
Clerical	21
Blue Collar	17
Household service	2
Retired	13
Unemployed	3
Not working, not looking	13
Other	1
Total	100%
HOME	
Own	73%
Rent	26
Total	100%
AGE¹	
18-24 years	13%
25-34 years	31
35-44 years	21
45-54 years	14
55-64 years	14
65 and over	8
Total	100%
REGION OF RESIDENCE	
New England (CT, ME, MA, NH, RI, VT)	1%
Eastern Gateway (NJ, NY)	3
George Washington Country. (DE, DC, MD, PA, VA, WV)	5
The South (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN)	4
Great Lakes Country (IL, IN, IA, MI, MN, OH, WI)	81
Mountain West (CO, MT, NE, ND, SD, UT, WY)	1
Frontier West (AZ, KS, MO, NM, OK, TX)	4
Far West (CA, ID, NV, OR, WA)	2
Total	100%
HOUSEHOLD STRUCTURE	
One adult	16%
Single adult with child	4
Two or more adults	45
Two or more adults with child	35
Total	100%

Table 21-5. Characteristics of U.S. travelers to and through Michigan, 1983-84 (continued).

Characteristic	N=282 Respondents
HOUSEHOLD SIZE	
One person	16%
Two persons	36
Three persons	20
Four persons	15
Five persons	13
Total	100%
NUMBER OF WAGE EARNERS	
None	16%
One	38
Two	40
Three or more	8
Total	100%
INCOME¹	
Less than \$10,000	9%
\$10,000- \$19,999	26
\$20,000- \$29,999	27
\$30,000- \$39,999	20
\$40,000 or more	17
Total	100%
CREDIT CARDS²	
Visa	44%
Mastercard	34
American Express	18
Carte Blanche	*
Diners' Club	1
None of these	29

*less than 5 percent.

¹Adjusted for non-response.

²Details add to greater than 100% due to multiple responses.

NOTE: "Travelers to and through Michigan" are defined as adults who took trips to a destination in Michigan or trips during which one or more nights were spent in Michigan. Since such travelers do not include individuals who traveled in Michigan but did not consider it their destination or did not spend one or more nights in Michigan, these estimates should not be construed as representative of all travelers in Michigan. It is perhaps most reasonable to consider these estimates to be generally representative of overnight travelers in Michigan since only 7% of the trips these respondents took were day trips. See discussion of study methodology in text. Details in this table may not add to 100% due to rounding.

SOURCE: U.S. Travel Data Center. 1985. Travel To and Through Michigan 1983-84. Special study prepared for the Michigan Travel Bureau. Washington, D.C.: U.S. Travel Data Center. Reprinted with permission.

Table 21-6. Number of travel agency locations in Michigan and surrounding states, 1977-1985.

YEAR	UNITED STATES	MICHIGAN	ILLINOIS	INDIANA	MINNESOTA	OHIO	WISCONSIN
1977	13,117	391	934	163	173	435	198
1978	15,114	447	999	189	216	480	235
1979	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1980	17,826	519	1,122	216	260	527	276
1981	18,306	520	1,129	217	278	531	288
1982	19,138	540	1,168	224	298	553	300
1983	21,964	599	1,316	263	337	633	342
1984	24,165	656	1,407	288	366	705	362
1985	26,439	698	1,530	325	412	758	395

NOTE: Data include retail travel agencies, wholesale travel agencies, and local tour operators/receiving agents.

SOURCE: World Travel Directory. New York: Ziff-Davis Publishing Co., annual.

Table 21-7. Characteristics of selected commercial attractions in Michigan.

Name	Location	Principal Facilities	Operates	1984 Attendance Level
Dutch Mountain Nursery	Augusta	Hiking trails	March-Oct.1	N.A.
Mussell Beach Amusement	Bay City	Kiddie rides, arcade, gift shop	May-Oct.	N.A.
House of Dark Shadows	Byron Center	Animal show, museum, petting zoo, tours	Year-round	N.A.
Park n Lakes Fun Center	Cadillac	Arcade, go-cart track, minigolf	June 8-Sept.2	Under 100,000
Deer Forest Park	Coloma	Major & kiddie rides, game concessions, petting zoo	May 25- Labor Day	Under 100,000
Sherwood Forest	Davison	Ballroom, beach, restaurant	Year-round	N.A.
Greenfield Village and Henry Ford Museum	Dearborn	Carousel, antique cars, exhibit hall, horse-drawn carriages and sleighs, museum, train ride, tours	Year-round	1-2 million
Boblo Island Amusement Park	Detroit	Major & kiddie rides, high dive show, live entertainment	May 26-Sept. 2	500,001-1,000,000
Marvins Marvellous Mechanical Museum	Farmington Hills	Kiddie rides, arcade	N.A.	300,001-500,000
Call of the Wild Museum	Gaylord	Gift shop, museum, western shop	Year-round	N.A.
Arnie's Funland	Grand Rapids	Go-cart track, minigolf, waterslide	April-Oct.	N.A.
Loeschner's Village Green Miniature Golf & Games	Grand Rapids	Arcade, minigolf	May 31-Labor Day	Under 100,000
Edgewater Park	Hartford	Beach, hiking trails, restaurant, stage shows, swimming	Apr.1-Sept. 30	N.A.
Dutch Village	Holland	Aerial ride, gardens, 1920 merry-go-round, stage show	Apr.22-Oct.22	N.A.
Funland Amusement Park, Inc. at Houghton Lake	Houghton Lake	Kiddie rides, arcade, go-cart track, minigolf, petting zoo, water attraction, game concessions	May 15-Labor Day	N.A.
Tom Sawyer Riverboat Cruise	Hulbert	Boat ride, gift shop	Memorial Day-Oct.10	N.A.
Fun Country	Interlochen	Go-cart tracks, minigolf, bumper boats, train, water slides	June-Aug.	N.A.
Totem Village	Manistique	Gift shop, museum, souvenir stand	May 1-Nov.	Under 100,000

Cedarview Golfland	Mason	Arcade, batting cages, driving range, golf course, minigolf	Apr.1-Sept.30	Under 100,000
Formula K Raceway	Mattawan	Major & kiddie rides, mini racetrack, go-cart track	Mar.1-Oct.31	100,001-300,000
Deer Park Funland	Muskegon	Major & kiddie rides, arcade, game concessions	Mem. Day-Labor Day	100,001-300,000
Kelley's Sports Land	Niles	Baseball cages, driving range, minigolf, arcade	Apr.-Oct.1	Under 100,000
Prehistoric Forest	Onsted	Arcade, game concessions, tours, water slide, gift shop	Mem. Day-Labor Day	N.A.
Stagecoach Stop USA	Onsted	Major & kiddie rides, arcade, museum, stage shows	May-Oct.	N.A.
Dinosaur Gardens Prehistoric Zoo	Ossineke	Botanical gardens, museum, golf course, gift shop	Apr.15-Nov.1	N.A.
Deer Acres, Inc.	Pinconning	Major & kiddie rides, arcade, petting zoo, gift shop	May 12-Oct.14	Under 100,000
Mystery Spot	St. Ignace	Arcade, gift shop, minigolf, picnic area, tours	May 5-Oct.18	Under 100,000
Blue Star Playland	Saugatuck	Major & kiddie rides, baseball batting, driving range	May 1-Sept.30	100,001-300,000
Soo Locks Tour Train & Haunted Depot	Sault Ste. Marie	Tours, game concessions, gift shop, snack stand, souvenir stand	May 24-Oct.15	Under 100,000
Bear's Lair	Tipton	Bumper boats, gift shop, go-cart track, water attraction	Apr.-Oct.	N.A.
Arne's Fun Land, Inc.	Traverse City	Major rides, arcade, go-cart track, water slide, minigolf	Mid-May-Mid-Sept	N.A.
Iron Mountain Iron Mine	Vulcan	Museum, tours, train ride, gift shop, souvenir stand	June 1-Oct.20	Under 100,000
Westworld	Westland	Golf course, bowling alley, banquet facilities, restaurant	Year-round	N.A.

SOURCE: 1985 Funparks Directory: A Guide to Tourist Attractions, Themed Parks, and Fun Parks. Nashville, TN: Billboard Publications, Inc., Amusement Business Division. Reprinted with permission.

APPENDICES

APPENDIX A

AUTHOR PROFILES

APPENDIX A

AUTHOR PROFILES

GALE C. JAMSEN is Information Manager of the Fisheries Division, Michigan Department of Natural Resources. He is primarily responsible for the execution of surveys of sport anglers in Michigan and has been involved in numerous studies of sport fishing in Michigan.

DOUGLAS B. JESTER, JR. is Program Services Manager of the Fisheries Division, Michigan Department of Natural Resources. His responsibilities include planning, budgeting, and marketing for the Fisheries Division. Mr. Jester has performed extensive research on commercial and sport fishing in Michigan.

JOHN D. KRUKOFF is a doctoral candidate and research assistant in the Department of Park and Recreation Resources at Michigan State University. Prior to entering the doctoral program he was Environmental Resource Manager for the Boulder County Parks and Open Space Department in Colorado. He holds a Master's degree in Public Administration from the University of Colorado.

EDWARD M. MAHONEY is an Assistant Professor and Extension Specialist in the Department of Park and Recreation Resources at Michigan State University. Dr. Mahoney provides individuals in the travel and tourism industry with instruction in marketing and business management through Cooperative Extension programs. He is also engaged in research on tourism marketing, the evaluation of travel/recreation advertising, and the economic impact of travel and tourism.

CHARLES M. NELSON is a Specialist in the Department of Park and Recreation Resources and a doctoral candidate in the Department of Forestry, Michigan State University. Mr. Nelson teaches courses on recreation land management, recreation resource policy, and National Parks. He is also engaged in research on Michigan state forest camping, Michigan state parks, and the beliefs, attitudes, and behavior of recreationists concerning forest management practices.

TIMOTHY E. REARDON provides consultation on real estate, recreation, and tourism development through Reardon Associates, a consulting firm based in Marshall, Michigan. He is also an Adjunct Professor in the Department of Park and Recreation Resources at Michigan State University. From 1976 to 1985 Mr. Reardon was Director of the Business Development Division of the Michigan Travel Bureau. Prior to joining the Travel Bureau he was associated with Real Estate Research Corporation, a Chicago-based consulting firm specializing in property analyses and economic planning services for investors, developers, and government agencies.

DANIEL M. SPOTTS is an Assistant Professor in the Department of Park and Recreation Resources at Michigan State University. Dr. Spotts is engaged in research on the monitoring of travel activity, the social and economic impacts of travel on northeast Michigan, and the characteristics of the central Upper Peninsula's travel market.

DANIEL J. STYNES is an Associate Professor in the Department of Park and Recreation Resources at Michigan State University. Dr. Stynes specializes in the mathematical modeling of recreation behavior, with applications to recreation planning, management, and marketing.

APPENDIX B

ABBREVIATIONS USED IN THIS BOOK

APPENDIX B

ABBREVIATIONS USED IN THIS BOOK

Abbreviations for State and Territories

AL	Alabama	NH	New Hampshire
AK	Alaska	NJ	New Jersey
AZ	Arizona	NM	New Mexico
AR	Arkansas	NY	New York
CA	California	NC	North Carolina
CO	Colorado	ND	North Dakota
CT	Connecticut	OH	Ohio
DE	Delaware	OK	Oklahoma
FL	Florida	OR	Oregon
GA	Georgia	PA	Pennsylvania
HI	Hawaii	RI	Rhode Island
ID	Idaho	SC	South Carolina
IL	Illinois	SD	South Dakota
IN	Indiana	TN	Tennessee
IA	Iowa	TX	Texas
KS	Kansas	UT	Utah
KY	Kentucky	VT	Vermont
LA	Louisiana	VA	Virginia
ME	Maine	WA	Washington
MD	Maryland	WV	West Virginia
MA	Massachusetts	WI	Wisconsin
MI	Michigan	WY	Wyoming
MN	Minnesota	DC	District of Columbia
MS	Mississippi	GU	Guam
MO	Missouri	VI	Virgin Islands
MT	Montana	PR	Puerto Rico
NE	Nebraska	AS	American Samoa
NV	Nevada	CM	Northern Mariana Islands

Other Abbreviations

N.A.	Not Available.
SIC	Standard Industrial Classification.
BCC	Business Classification Code (used by Michigan Department of Treasury).
n.d.	No date on publication.
FY	Fiscal Year.
N=	In survey research, the number of observations upon which a statistic is based.
(D)	Figures withheld to avoid disclosure of operations of individual establishments

APPENDIX C

ADDITIONAL REFERENCES

APPENDIX C

ADDITIONAL REFERENCES

- Ackert, Gary A. and Maureen McDonough. 1986. "Marketing Your Community Park and Recreation Resources: Developing Exhibits." Extension Bulletin E-1932. Cooperative Extension Service, Michigan State University. East Lansing.
- Angelo, Rocco M. 1985. Understanding Feasibility Studies: A Practical Guide. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Aulbach, Robert E. 1984. Energy Management. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Berkman, Frank W., David C. Dorf, and Leonard R. Oakes. 1978. Convention Management and Service. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Blank, Uel and Clare A. Gunn. 1966. Guidelines for Tourism-Recreation in Michigan's Upper Peninsula: A Report and Recommendations. Ann Arbor, MI: Johnson, Johnson, & Roy, Inc., Landscape Architects.
- Blomstrom, Robert L. (ed.). 1982. Strategic Marketing Planning in the Hospitality Industry: A Book of Readings. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Central Michigan University, Center for Economic Expansion and Technical Assistance. 1965. Michigan Tourism. Volume One. Mount Pleasant, MI: Central Michigan University.
- Cooper, Colleen R. and Mary L. Ploor. 1984. "Agriculture/Tourism Project: Summary Report." Dept. of Agricultural and Extension Education, Michigan State University. East Lansing.
- Coy, Jeff and Ron Elcombe. 1985. Marketing Planning Guide. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Daschler, John P. and Jack D. Ninemeier. 1984. Supervision in the Hospitality Industry. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Educational Institute of the American Hotel and Motel Association. n.d. Reducing Employee Turnover. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Fay, Clifford T. Jr.; Raymond S. Schmidgall; and Stanley B. Tarr. 1982. Basic Financial Accounting for the Hospitality Industry. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Forrest, Lewis C. Jr. 1982. Training for the Hospitality Industry. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Gee, Chuck Y. 1981. Resort Development and Management. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.

- Holecek, Donald F. and Richard D. Westfall. 1977. "Public Recreation on Private Lands-The Landowners' Perspective." Michigan State University Agricultural Experiment Station Research Report 335. East Lansing.
- Kress, George and R. Ted Will. 1974. "Marketing Checklist for Small Retailers." Management Aids Number 4.012. Washington, D.C.: U.S. Small Business Administration, Office of Management Assistance.
- Leisure-Net, Inc. 1985. The Michigan Leisure & Recreation Directory. Livonia, MI: Leisure-Net, Inc.
- McDonough, Maureen H. and Cheryl L. Dyer. 1983. "Marketing Your Community Park and Recreation Resources: Program Ideas for Slide-Tapes." Extension Bulletin E-1710. Cooperative Extension Service, Michigan State University. East Lansing.
- McIntosh, Robert W. 1972. "Recruiting and Training Employees in the Service Industries." Extension Bulletin 484. Cooperative Extension Service, Michigan State University. East Lansing.
- McIntosh, Robert W. 1974. "Employee Motivation and Work Incentives in the Service Industries." Extension Bulletin 483. Cooperative Extension Service, Michigan State University. East Lansing.
- McIntosh, Robert W. 1979. "Tourism and Your Community." Extension Bulletin E-729. Cooperative Extension Service, Michigan State University. East Lansing.
- Michigan Department of Commerce, Travel Bureau. n.d. "An Evaluation of Major Tourism Industry Development Opportunities in Northeast Michigan: A Report to the Upper Great Lakes Regional Commission." Lansing, MI: Michigan Travel Bureau.
- _____. n.d. "Michigan Attractions and Festivals Guide." Lansing, MI: Michigan Travel Bureau.
- _____. n.d. "The Concept and Feasibility of a Regional Attractions Center in the Upper Great Lakes Region: A Report to the Upper Great Lakes Regional Commission." Lansing, MI: Michigan Travel Bureau.
- _____. n.d. "Convention Market Survey, Report 1: General Market Characteristics of National and Regional Associations and Conventions." Lansing, MI: Michigan Travel Bureau.
- _____. n.d. "Convention Market Survey, Report 2: General Market Characteristics of Michigan State Associations." Lansing, MI: Michigan Travel Bureau.
- _____. n.d. "Convention Market Survey, Report 3: Market Size and Potential for Conventions and Business Meetings." Lansing, MI: Michigan Travel Bureau.
- Michigan Department of Transportation. n.d. Highway Travel Information Centers and Michigan Tourism: 1980 Visitor Survey. Lansing, MI: Michigan Dept. of Transportation.
- _____. n.d. Michigan Travel Information Systems. Lansing, MI: Michigan Dept. of Transportation.

- Michigan House of Representatives, Tourism and Recreation Committee. 1983. "State Tourism and Recreation Policy: 10 Billion Dollars Annually and Potential for Growth." Final Report of the Sub-Committee on State Tourism Policy, Tourism Advisory Group. Lansing.
- Michigan Travel Commission. 1981. "A Report on Michigan Travel Commission Advertising and Promotion Policies, Activities, and Their Effects." Submitted to Governor William G. Milliken.
- Moncrief, Lewis W., James N. Holleran, and John A. Scholtz. 1976. "Michigan's Commercial Horse Industry." Michigan State University Agricultural Experiment Station Research Report 323. East Lansing.
- Neal, James E. and John K. Trocks. 1971. "A Guide for a Feasibility Study...of Recreation Enterprises." Extension Bulletin 705. Cooperative Extension Service, Michigan State University. East Lansing.
- Newson, H. D. 1978. "In Recreation Areas...Management of Biting Insects." Extension Bulletin E-708. Cooperative Extension Service, Michigan State University. East Lansing.
- Propst, Dennis B., Lewis W. Moncrief, and Charlotte Young. 1984. The Relationship Between Agriculture and Tourism in Michigan. Department of Park and Recreation Resources, Michigan State University. East Lansing.
- Rockford Map Publishers, Inc. 1983. Michigan Travel and Recreation Guide. Rockford, IL: Rockford Map Publishers, Inc.
- Romig, Walter. n.d. Michigan Place Names: The History of the Founding and Naming of More Than Five Thousand Past and Present Michigan Communities. Gross Point, MI: Walter Romig - Publisher.
- Thatcher, J. Jay. 1974. "Recreational Destination Developments for Michigan's Upper Peninsula." Technical paper for M.S. degree, Department of Park and Recreation Resources, Michigan State University. East Lansing.
- "Travel and Tourism: The Lifeline of Lodging." Lodging Reprint No. 37. East Lansing, MI: The Educational Institute of the American Hotel and Motel Association.
- Tremont, David John. 1975. "Effect on Complementary Services and Facilities on Tourist Holding Power at Three Attraction Regions in the Eastern Upper Peninsula." Unpublished paper for M.S. degree, Dept. of Park and Recreation Resources, Michigan State University.
- U.S. Dept. of Commerce, Economic Development Administration. 1981. Creating Economic Growth and Jobs Through Travel and Tourism: A Manual for Community and Business Developers. Washington, D.C.: U.S. Government Printing Office.
- U.S. Small Business Administration, Office of Management Assistance. 1973. "Business Plan for Small Service Firms." Management Aids Number 2.022. Washington, D.C.: U.S. Small Business Administration.

U.S. Small Business Administration, Office of Management Assistance. 1981. "Checklist for Going Into Business." Management Aids Number 2.016. Washington, D.C.: U.S. Small Business Administration.

University of Missouri. 1978. Appraising Tourism Potential. Volume I of the "Tourism USA" Series. Washington, D.C.: U.S. Travel Service.

_____. 1978. Planning for Tourism. Part of Volume II of the "Tourism USA" Series. Washington, D.C.: U.S. Travel Service.

_____. 1978. Assessing Your Product and the Market. Part of Volume II of the "Tourism USA" Series. Washington, D.C.: U.S. Travel Service.

_____. 1978. Marketing Tourism. Part of Volume III of the "Tourism USA" Series. Washington, D.C.: U.S. Travel Service.

_____. 1978. Visitor Services Programs. Part of Volume III of the "Tourism USA" Series. Washington, D.C.: U.S. Travel Service.

_____. 1978. Sources of Assistance. Volume IV of the "Tourism USA" Series. Washington, D.C.: U.S. Travel Service.

Williams & Works. 1978. "Canoeing in Michigan: Analytical Assessment." Report to the Travel Bureau, Michigan Department of Commerce.

APPENDIX D

DESCRIPTION OF THE MICHIGAN TRAVEL, TOURISM AND
RECREATION RESOURCE CENTER

APPENDIX D

DESCRIPTION OF THE MICHIGAN TRAVEL, TOURISM AND RECREATION RESOURCE CENTER

Purpose and Goals

The travel, tourism, and recreation industry in Michigan ranks among the state's top industries and has potential for considerable expansion. A key to Michigan's success in this growing and increasingly competitive industry is information to guide investments of capital and other scarce resources. The Michigan Travel, Tourism and Recreation Resource Center (TTRRC) was established at Michigan State University to forge this key to success for Michigan's private businesses and public agencies. The primary goal of the Center is to enhance and facilitate access to information needed to further the economic development of this industry.

To accomplish this goal, the Center will serve as a nucleus to attract other agencies, institutions, organizations, and individuals to the common cause of upgrading travel, tourism, and recreation information bases and services.

The Travel Bureau of the Michigan Department of Commerce and the Michigan departments of Natural Resources and Transportation were instrumental in framing the Center concept and will be major partners in developing and implementing its programs. The Center is administered by the Department of Park and Recreation Resources in the MSU College of Agriculture and Natural Resources. It is funded in part by the Agricultural Experiment Station and the Cooperative Extension Service.

Programs and Targeted Needs

The Center has three major programs that will initially address five priority needs of the travel, tourism, and recreation industry. The programs include:

Research--to collect and analyze information to meet the many information needs of this industry.

Information storage and retrieval systems--to accumulate for quick and easy access a wide range of information relevant to the needs of the industry.

Technical assistance--to disseminate information in the Center's data systems and to help clients learn to use this information effectively.

Throughout all of its programs, the Center will employ the latest in computer and communications technologies to broaden the range and effectiveness of its programs and to demonstrate how these new technologies can serve this industry.

The five needs the Center has targeted to address initially include:

Monitoring and tracking--to better assess the conditions in the industry, both statewide and regionally.

Product development--to help the industry identify investment opportunities and to facilitate new investments and business expansions.

Promotion--to assist in developing, implementing, and evaluating promotion strategies and programs.

Business management and marketing--to facilitate adoption of sound management and marketing practices, especially among the smaller businesses which dominate this industry.

Futures--to provide insight into the long-range economic and social forces that pose both potential problems and opportunities for the industry.

Change is inevitable, and the Center will periodically shift resources to target newly emerging priority needs of the industry.

How You Can Help

The Center's ultimate reason for being is to provide services to the travel, tourism, and recreation industry, either directly through its campus-based staff or indirectly by supporting the work of others involved in this industry. To achieve its overall goals, the Center requires assistance in many forms. If it is to serve effectively as an information clearinghouse for this industry, your assistance in funneling information to the Center is crucial. Similarly, the Center's tax-supported funding base will limit how quickly its programs will become fully operational and the amount of service it can provide. Thus the Center could benefit from your financial support. Most important, however, it requires your input in identifying how its programs can serve you.

To become involved, you may contact us directly at the address or phone number below, or contact your county Cooperative Extension Service office.

Prof. Donald F. Holecek, Director
Michigan Travel, Tourism and Recreation Resource Center
131 Natural Resources Building
Michigan State University
East Lansing, MI 48824-1222
(517) 353-0823

ORDER FORM FOR ADDITIONAL COPIES

TRAVEL AND TOURISM IN MICHIGAN: A STATISTICAL PROFILE

Research Monograph #1 Michigan Travel, Tourism and Recreation Resource Center

First Edition, 1986

Price \$20.00 per copy. Price includes handling and domestic postage.

Quantity desired _____

Enclosed as payment \$ _____

Make checks/money orders payable to Michigan State University.

Name/Title _____

Organization _____

Address _____

City _____

State _____ Zip Code _____

Phone(_____) _____

Mail to :



Michigan Travel, Tourism and Recreation Resource Center
131 Natural Resources Building
Michigan State University
East Lansing, MI 48824-1222
(517) 353-0823